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Naval Postgraduate School 2020 Annual Report and Mission Measures: Decisive Advantage Delivered

Naval Postgraduate School, Monterey, California.

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NAVAL POSTGRADUATE SCHOOL

2020

ANNUAL REPORT AND MISSION MEASURES

DECISIVE ADVANTAGE DELIVERED

2020

ANNUAL REPORT & MISSION MEASURES



A Review of the 2020
Calendar Year and
AY2020 Mission Measures



APPLIED | CLASSIFIED | INNOVATIVE |

MISSION

Provide defense-focused graduate education, including classified studies and interdisciplinary research, to advance the operational effectiveness, technological leadership and warfighting advantage of the Naval service.



For Decisive Advantage



INTERDISCIPLINARY | RESPONSIVE | SECURE

A Message from the President

By Ann E. Rondeau, Vice Admiral, USN (Ret.)



What a year! 2020 was defined by COVID-19, but COVID-19 did not define the Naval Postgraduate School [NPS]. I say this with the utmost pride and awe in all that was accomplished, and simultaneously with the utmost respect and empathy for the suffering many experienced in our community, military, across our country and around the world. Everything changed. We learned more about ourselves, and how to live in new ways. From shutdowns and face masks, to elbow bumps and socially distanced, what kept us apart also brought us together.

2020 exemplified **Who We Are ...** We found new ways of learning and interacting at NPS. With safety and public health as our priority, the NPS faculty, staff and students transitioned to full distance learning and telework nearly overnight. Not a single academic day was lost. For many, the difficulties were also inspiration to come together in solidarity to support each other, to watch after and tutor our military children, and ultimately fight alongside to overcome a common viral enemy.

At NPS, we are who we serve ... We are military leaders, defense-focused educators and staff serving those who serve our nation. This sense of service drives us to prevail, and our ethos is what sets us apart as an institution developing the leaders and capabilities that will power our Advantage at Sea and national defense.

2020 focused **What We Do ...** We began the year with great expectations: The Meyer Scholar program was launched to deliver the science/engineering disciplines associated with Integrated Air and Missile Defense; two NPS graduates were among NASA's latest class of astronauts; and the Education for Seapower Strategy was released. Then suddenly COVID-19 changed everything, but also illuminated what is mission essential for NPS: warfighter education, applied research, classified coursework, secure laboratories, IT access and vital support activities. From this, our core work emerged, and we established the Naval Warfare Studies Institute [NWSI] to help foster and further harness our impact.

At NPS, research-based defense education is what we do...our interdisciplinary scholarship and applied research in a diverse military environment develops relevant research solutions to operational problems and leaders educated to employ them.

2020 epitomized **Why It Matters ...** We are mission-focused on outcomes. Even in the face of a daunting global pandemic, the NPS community remained true to its mission. Unabated, NPS continued to serve the needs of our students, Naval forces, DoD and the nation — discovering new knowledge, delivering impactful solutions and developing military leaders. This extraordinary achievement bespeaks superlative agility and unity of effort. No other graduate university can claim the same.

At NPS, we develop the future leaders of the Future Force ... our graduates have the technological and intellectual edge. They are the decisive advantage we deliver, prepared to compete, deter and prevail in the contemporary battlespace — to outthink, outmaneuver and outfight.

NPS continued to evolve and innovate in 2020. We conducted the first virtual Big Idea Exchange and Warfare Innovation Continuum by NWSI. Graduations, guest lectures and Joint Interagency Field Experimentations [JIFX] were done in new formats. We gained research partnerships in emerging technologies like 5G, Artificial Intelligence and additive manufacturing; commissioned the NavalX Central Coast Tech Bridge and became a chartered member of the Naval R&D Establishment; we launched new distance learning certificates in Data Science, Autonomy and AI; and was reaccredited for 10 years, max achievable. Finally, recognizing our potential as a warfighting enabler, the NPS mission was revised in 2020 to reflect this new emphasis and increasing need for technological leadership.

Change is our constant companion. NPS is in the midst of great change in higher education and in the Navy and Marine Corps and DoD. We have in front of us rapid technology-driven challenges shaping national security, economic priorities and new strategic requirements in a Great Power Competition. Today, our forces must be technologically competent and strategically savvy in both the cognitive and conventional arenas.

I believe our intellectual capital and critical thinking will be the decisive difference in all of these challenges. Armed with technological leadership and insight, NPS graduates are our decisive advantage.

In this, I see the enduring value of Who we are, What we do and Why it matters. Everyday.
In abiding service,

A handwritten signature in dark ink that reads "Ann E. Rondeau".

Ann E. Rondeau

The Naval Postgraduate School

Value Proposition

The Naval Postgraduate School [NPS] is where science meets the art of warfare. As the Department of Navy's applied research university, NPS is the nexus of Naval research, education and innovation and a strategic capability to optimize. It is the premier source for thought leadership, innovative solutions and military leaders prepared to excel across the spectrum of competition and the all-domain battlespace to deter, fight and win in the 21st century.

Since its inception in 1909, the basic rationale for the NPS has not changed—to provide Naval officers with advanced education oriented toward the critical thinking and comprehensive technical skills in their primary warfighting duties and needed to design and deploy emerging technology in the Fleet to fight and win future wars. In 2020, NPS operated four defense-focused graduate schools overseeing 24 academic departments and groups. Dozens of research groups provided relevant research solutions.

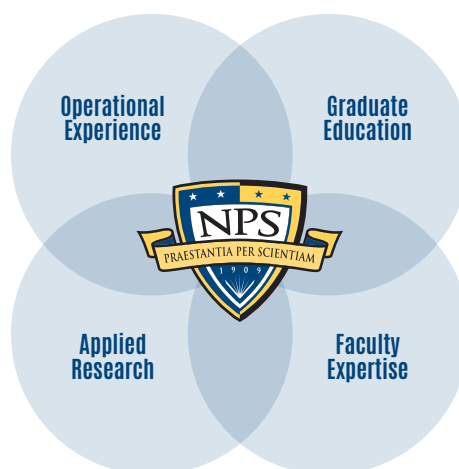
Our students are operationally experienced, mid-career officers, many with recent combat experience. At NPS we teach our students how to think critically and connect strategically. They become proficient at navigating uncertainty, comfortable with ambiguity and skilled at thinking about employing new techniques and technologies in situations they have not thought about before.

NPS students co-discover and disseminate new knowledge. Every degree student at NPS must complete an applied research thesis or capstone project to graduate [some resulting in patent-eligible technologies, averaging 10-15 per year]. More than 2,300 resident and distance learning degree students were enrolled at NPS in 2020 with hundreds more earning certificates in STEM subjects such as AI, autonomy and Data Science.

The student-learning experience at NPS is a journey of learning for both students and faculty—this is the role and requirement of applied research with advanced education. Consequently, NPS graduates are exceptionally well prepared to face unanticipated conflict situations, and then apply their technical and tactical talents to generate innovative approaches to meet our country's future challenges.

Our Unique Strengths: NPS is **Responsive** to operational needs through tailored education and research. NPS complements the Naval research community through **Interdisciplinary** education and **Applied** research producing **Innovative** solutions to relevant problems. NPS offers **Classified** coursework and research in controlled laboratories on our **Secure** campus. We do this in an interservice, interagency and international diverse military environment.

Our Value Proposition: Only NPS synchronizes student operational experience and graduate education with applied research and faculty expertise, to deliver twice the return on education investment: relevant warfighting solutions, and leaders educated to employ them.



NPS Mission Metrics

"Provides defense focused graduate education ..."

- **68** graduate resident and distance learning programs in technical and engineering fields [2020 graduates: 305]
- **32** graduate resident and distance learning programs in defense management and security studies [2020 graduates: 203]
- **16,066** total student engagement [resident, distance, certificate, Exec-Ed]
- **82** continuous learning, certificate, short courses, special seminars, METs [2020 454 participants]

"... including classified and interdisciplinary research ..."

- More than **1,000** research thesis and capstone projects delivered every year
- In 2020 over **150** interdisciplinary education, research, and field experimentation programs executed
- In 2020 **30%** of all sponsored research was approached with interdisciplinary teams
- In 2020 over **120** classified/restricted research and education activities were conducted [25% of all sponsored research]
- In 2021 **60%** of NPS Naval Research programs directly support CNO Key Operational Problems

The Naval Postgraduate School

Our History is Distinguishing and Distinguished

Ordered by President Theodore Roosevelt, the record-setting world cruise of the Great White Fleet, 1907-1909, was a powerful show of American strength and U.S. foreign policy. 16 of the latest U.S. Navy's battleships provided the strongest evidence yet that science and engineering prowess were of critical importance to U.S. seapower.

To further sharpen our Naval technological advance, Secretary of the Navy George von L. Meyer signed General Order No. 27, that same year establishing a graduate-level school of marine engineering at Annapolis, which would later become the Naval Postgraduate School [NPS]. In 1912, Meyer broadened NPS' role in officer graduate studies by directing that ordnance and gunnery electrical engineering, radio telegraphy, naval construction, civil engineering be added to the curriculum, laying the foundation for NPS to become an innovation hub where officers apply the tools of graduate academic rigor to developing solutions to operational problems.

During World War II, Fleet Admiral Ernest King, Chief of Naval Operations and Commander-In-Chief of both the Atlantic and Pacific fleets, established a commission to review the role of graduate education in the Navy. By the end of the war, it was apparent that the facilities of NPS at the Naval Academy at Annapolis, were insufficient for the Navy's future needs.

Fleet Admiral Chester Nimitz noted, *"To my horror — I learned that on 'D' Day — it was planned to close down the Naval War College and the Naval Postgraduate School in order to provide officers for an expanding Fleet — as was done on 'D' Day for World War I," said Nimitz reflecting on the war plans he received as his first act as Chief of Bureau of Navigation. "I immediately cancelled those plans and prepared for expanded classes at both..."*

Nimitz, King, along with SECNAV James Forrestal had a vision for the future of Naval graduate education and are considered the architects of today's NPS. In early 1944, more than a year before the first peace accord of World War II was signed, King's actions set the stage for landmark legislation in the 79th and 80th Congresses that transformed NPS. Public Law 250 of December 1945 authorized the Postgraduate School to confer advanced degrees *"in engineering and related fields"* and NPS became a graduate Naval university with expanded research facilities, and led to the purchase of the world-famous 627-acre Hotel Del Monte in Monterey, previously home to a Navy flight school established in February 1943 [called the Del Monte Pre-Flight School, it graduated nearly 5,000 aviation cadets in 11 months before it was decommissioned in January 1944].

NPS moved to Monterey In 1951, and the coast-to-coast move involved 500 students, about 100 faculty and staff, and thousands of pounds of books and research equipment. Rear Adm. Ernest Edward Herrmann supervised the move that pumped new vitality into the Navy's efforts to advance naval science and technology.

In a 1959 commencement address at NPS to mark its 50th anniversary, then-Chief of Naval Operations Adm. Arleigh Burke, a 1930 NPS alumnus, attributed several important naval advances to the Navy's long-term commitment to postgraduate education. *"Rapid technological advance...did not come by accident, nor did it come overnight. It has been the result of educating carefully selected officers in each succeeding generation of officers,"* he said.

"The naval leaders of 50 years ago showed great perspective and foresight in seeing the need for advanced technical and scientific knowledge among naval officers. They recognized that ships and naval weapons were becoming more complex, that their proper employment at sea would require officers who were familiar not only with the age-old profession of the sea, but who could understand and could use effectively the complex weapons of the years to come."

Burke spoke then to the core purpose of NPS and since, NPS has become a hub of defense-focused graduate education and applied research that has led to significant advancements in the development of Fleet tactics, Numerical Prediction and Dynamic Meteorology, shipboard satellite communications, the AEGIS radar and combat system, special operations and terrorism network analysis, operations research and modeling, and many more that have left a lasting impact on the Navy, Marine Corps, and DoD.

Today, U.S. maritime supremacy must contend with increasing Great Power Competition, which is fundamentally an innovation race—one well contested by our near-peer rivals. NPS' technical educational and research programs evolved in 2020 responding to meet this changing Naval and national defense need. Building on our history of collaboration in research and education to accelerate naval innovation, NPS became the first Navy command to be in both the Naval Education Enterprise and a chartered member of the Naval R&D Establishment [NR&DE]. The NPS mission was revised in 2020 to leverage this distinction.

"The technical advances of the past century have brought complexities to naval war which have made mandatory a comprehensive Naval Postgraduate School. In establishing the Postgraduate School at Monterey we have reaffirmed our conviction that Seapower rests on science."

Vice Admiral Thomas L. Sprague
Chief Bureau of Naval Personnel, 1948





NPS is developing the leaders the Navy needs for the future force. I saw students who are developing tangible solutions to key operational problems which are needed in the Fleet.

Adm. William Lescher, USN
Vice Chief of Naval Operations

NPS' faculty and operationally-experienced students apply both their expertise and cutting-edge educational programs to research solutions in direct response to key operational problems in all domains. Critical to the warfighter are capabilities and applications of emerging technologies that provide them with advantage.

The 2018 Winter Olympics in Pyeong Chang, South Korea dazzled audiences with more than 1,200 drones flying in formation and conducting swarm maneuvers. The same drone swarm tactics that awed viewers could potentially pose a threat to warfighters in many warfighting domains.

This past year, NPS professors Isaac Kaminer and Abe Clark emerged as

RESEARCH, EDUCATION, APPLICATION

national leaders in the development of a counter-swarm analysis toolbox. Both professors had already spent years studying the analytical foundation for swarm-on-swarm engagements.

Swarm scenarios can vary from flying patterns to control to weaponization. Kaminer and Clark used optimization protocols to build a playbook of tactics for these varied scenarios. They adapted the mathematical theory of optimal control to allow room for unknown variables while providing feedback to officers for decision-making.

With support from NPS' Consortium for Robotics and Unmanned Systems Education and Research [CRUSER] and building upon research previously funded by the Office of Naval Research

[ONR] Autonomy program, Kaminer and Clark apply their research experience for the DOD to provide a countermeasure against drone swarms. Their project also involves partnering with the Marine Corps Systems Command [MCSC], the Program Executive Office [PEO] Land Systems and Ground-Based Air Defense [G-BAD] to add input regarding real-world threats.

"We want to make a framework that can model any particular kind of drone with any particular kind of weapons capabilities and also have some other ground-based weapons included," Clark explains. "Then we can hopefully just change a few lines of code, and we can still

push play on the whole framework."

As drone swarms feature individual units operating together into a single unit, NPS uses the applied capabilities of faculty research, operationally-experienced officers, and input from DOD organizations to research solutions for Fleet and Force needs. ■



TECHNOLOGICAL LEADERSHIP, CLASSIFIED RESEARCH

The science, curriculum and personal experiences [at NPS] are unmatched. What I learned via the curricula, faculty and my fellow students positioned me to lead, excel, and make an immediate impact after graduation.

Lt. Paul Cross [2018]
NSWC Dahlgren

Hypervelocity projectiles. Counter unmanned aircraft systems. Advanced space technologies...to name a few.

The ability to conduct classified research and education programs in a number of facilities and classrooms makes NPS a very unique institution among its peers. And it certainly equips graduates to be technological leaders, delivering solutions upon their return to the fleet and force.

Making an immediate impact in the Fleet was Lt. Paul Cross. As a 2018 graduate, Cross conducted his NPS research on advancing electromagnetic weaponry at NPS' Railgun laboratory — the largest of any academic institution. After graduation, he put his education to immediate use at a Naval Warfare Center in Dahlgren, Virginia.



In fact, Cross' contributions were so valuable that his command selected him for the C.J. Rorie Award — named in honor of retired Rear Admiral C. J. Rorie, a former warfare center commander and NPS alumnus. The award is presented for outstanding leadership in the Gun Launched Guided Projectile effort leading a successful fielding of a guided projectile.

"The science, curriculum and personal experiences [at NPS] are unmatched," said Cross. "What I learned via the curricula, faculty and my fellow students positioned me to lead, excel, and make an immediate impact after graduation."

Marine Corps Maj. Michael Wade [2015] leveraged his NPS education and research in radar systems to great advantage for the USMC, serving as

the subject matter expert on radar in support of the Ground/Air Task Oriented Radar [G/ATOR] program, and then the Ground-Based Air Defense [G-BAD] program applying what he discovered at NPS to the systems he managed.

Wade returned to NPS in 2020 to find the next bright Marine to replace him. He was pleased to see a growing pool of Marines exploring highly-technical areas of study, and was quick to point out it was the combination of his experience in the battlefield and his technical research at NPS is what made the difference.

"There are things that we think about on the battlefield that others don't," he explained. "When you're here at a

program office building warfighter capability, and you understand the issues and requirements of the battlefield and are building a system to meet those, [that experience] really makes for a more effective system." ■





Advanced education is so important now, and in the future. NPS develops critical thinkers in so many areas, and develops new concepts of operations and capabilities to address the threats in this 21st century in a collaborative and free-thinking way.

Adm. Cecil Haney, USN [Ret.]
Distinguished Alumnus

The Naval Postgraduate School continues to be a national leader in Naval innovation, thanks to the unique combination of warfighters, researchers, dedicated partners and a mission to support Navy and Marine Corps priorities.

One such example of innovation in a field that supports the broader Naval mission is the university's research of the changing Arctic environment. On the modeling front, NPS' activities in developing increasingly accurate and complex models, like the Regional Arctic System Model [RAMS] helps the Navy understand an environment it needs to be in, now and well into the future.

Meanwhile, NPS researchers continue to gain valuable insight into how envi-

INNOVATION IN THE FIELD, FOR THE MISSION



ronmental systems in the Arctic work. Last year, an NPS research team found that there was more life under the sea ice than previously thought, helping climate researchers better understand how much carbon this part of the Earth can absorb.

NPS has also helped lead Arctic expeditions like the Multidisciplinary drifting Observatory for the Study of Arctic Climate [MOSAiC] and are regular participants in the Navy's ICEX exercises, where students and researchers discover more about the complex environment and its impact on undersea operations. In 2020, an NPS group that participated in ICEX 2020 collected data on thermohaline staircases, where salinity and temperature can challenge underwater navigation.

The importance of innovative research like this is further emphasized by the Blue Arctic report, released by the Department of the Navy in early 2021, which outlines how the service can stay ahead of Arctic exploration over the next two decades. As the Arctic melts, a new connection between nearly 75 percent of the world's population is emerging, presenting new economic and natural resource opportunities to countries who start preparing for it now.

This is how innovation on the NPS campus, in collaboration with our research and educational partners, helps the university impact the mission effectiveness of Naval services. Along the way, well-educated leaders are developed to guide the Navy and nation in answering the strategic challenges that await them. ■



WHERE SCIENCE MEETS THE ART OF WARFARE

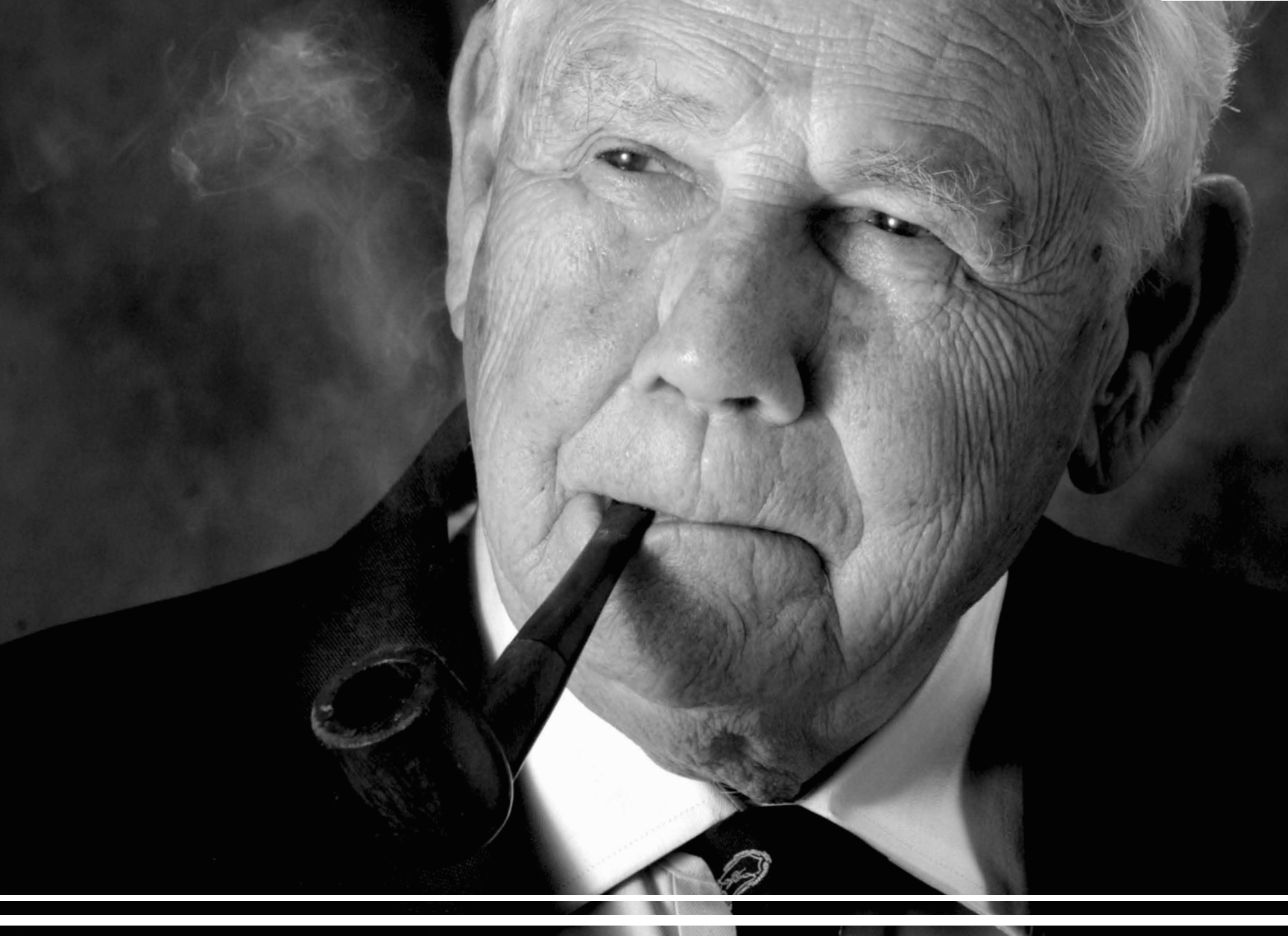
NWSI epitomizes what we at NPS are seeking to deliberately achieve, and that is the alignment of our work, our research, our education, our students and faculty focused on those things that are important to our warfighters ... NWSI is how we can bring together all that we are here at NPS to Great Power Competition in this Cognitive Age.

Vice Adm. Ann E. Rondeau, USN [Ret.]
President, Naval Postgraduate School

NPS combines faculty expertise, student experience and S&T curricula to transform multidisciplinary problems into interdisciplinary solutions for real-world naval needs. To expedite connections, access and research between NPS and the Fleet, the university developed the Wayne P. Hughes, Jr. Naval Warfare Studies Institute [NWSI] in honor of the late, revered Naval strategist.

NWSI will serve as an essential portal connecting the Fleet with NPS' immense talent, resources and research to address the most complex warfighting issues and operational challenges.

In this era of Great Power Competition, the NWSI connection will prove critical in retaining the technological, tactical



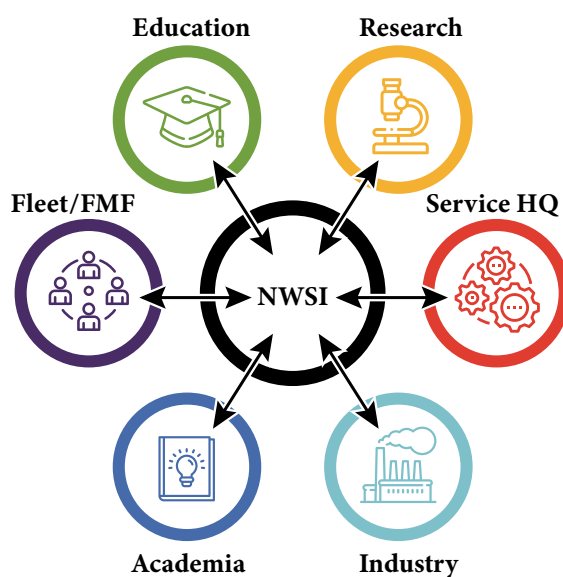
and cognitive edge necessary to prevail in future conflicts. As competitors continually challenge the U.S. Navy's control of the seas, new concepts such as distributed maritime operations and expeditionary base operations take center stage.

NPS has the capability to thoroughly explore every aspect of these emerging naval warfighting concepts. NWSI provides a single point of entry to harness this capability by providing a hub of experts who coordinate collaboration within the NPS ecosystem in order to accelerate and enhance the development of new warfare concepts and capabilities.

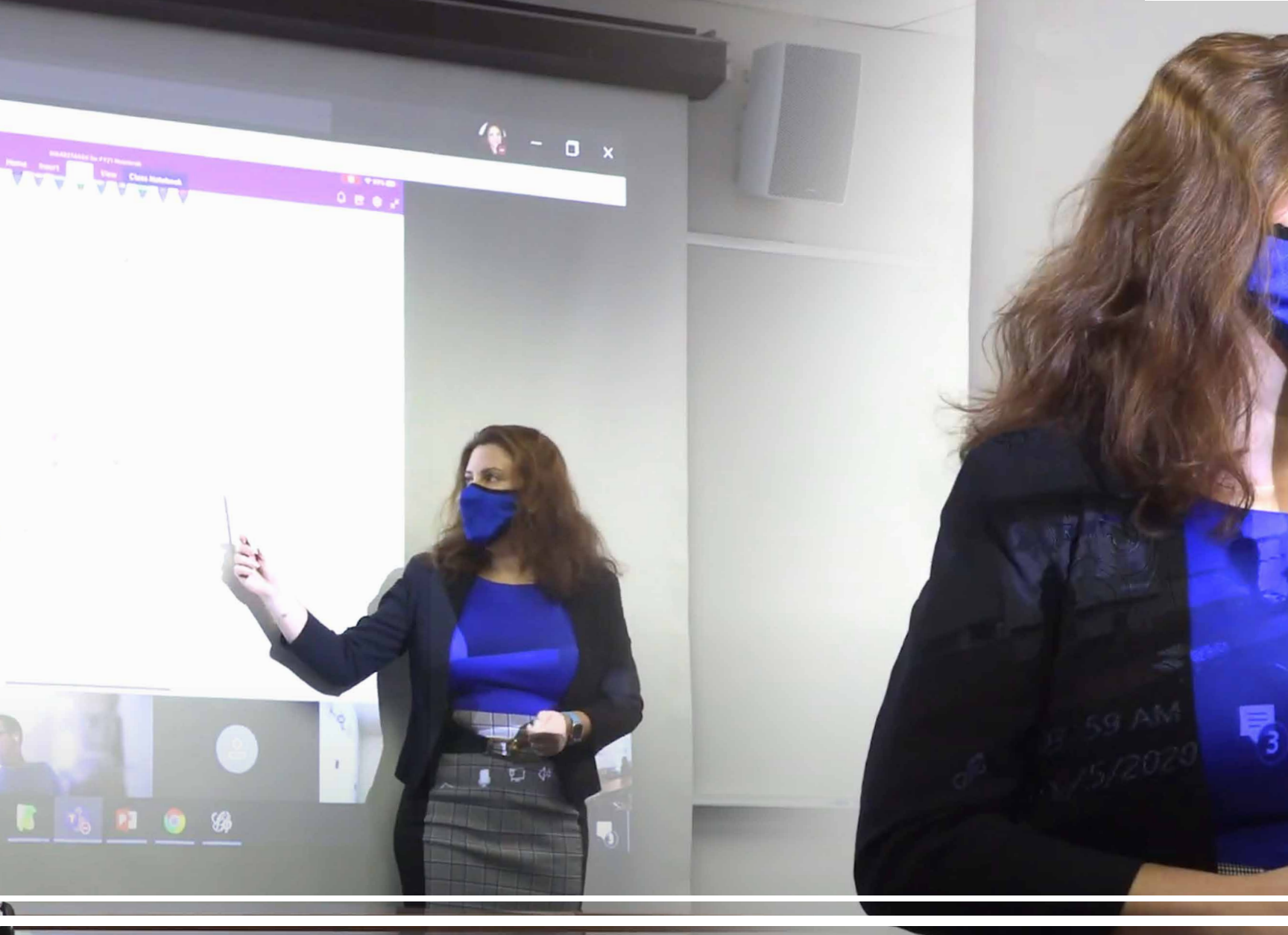
"NWSI is an institution that can call

on help from different people in different domains, different warfare chairs, different faculty and students to address key operational problems," explained NWSI

Director retired Navy Capt. Jeff Kline "It is a venue to leverage NPS faculty, students, education and research activities to address operational and concept development issues in an interdisciplinary manner."



Such unity of effort has become an imperative in the Cognitive Era, in which intelligent systems, big data, machine learning and artificial intelligence increasingly augment human activity and decision-making. As the Navy leans into Great Power Competition, advanced education, applied research and innovation will be the deciding factors in establishing the warfighting advantage of the Naval services. ■



In less than two weeks, NPS moved all classes, with the exception of classified studies, for the roughly 1,500 on-campus students to a virtual setting using online collaboration tools that are now household names.

The Naval Postgraduate School is continuously adapting and responding to the needs of the Navy and Marine Corps, and the DOD writ large, by conducting applied research and fostering collaboration between faculty, students and partners across defense, industry and academia. The vast network of NPS stakeholders, research partners and alumni covers the globe and allows for real-time feedback on modern problems, and how the NPS community can work to provide dynamic solutions.

This ability to be responsive was dramatically challenged in March of 2020 when the novel Coronavirus, more commonly known as COVID-19, swept across the country and the globe. With little time to plan and even less time to act,



APPLIED | CLASSIFIED | INNOVATIVE | INTERDISCIPLINARY | **RESPONSIVE** | SECURE

RESPOND, ADAPT AND OVERCOME

NPS had to adjust accordingly as we entered the beginning of a long, dark tunnel that we continue to traverse with a little more light guiding us. As the school geared up to come together to celebrate another cohort of students evolving into alumni, state-wide 'stay-at-home' orders flocked to the tops of newsfeeds.

NPS responded, quickly, creating a new normal to ensure the mission of graduate education and research continued.

The university boasts a long history of distance learning [DL] education, dating back to the mid-1990s, however, face-to-face instruction is most often the best option for many kinds of learning. Laboratory, science and technology education, along with the

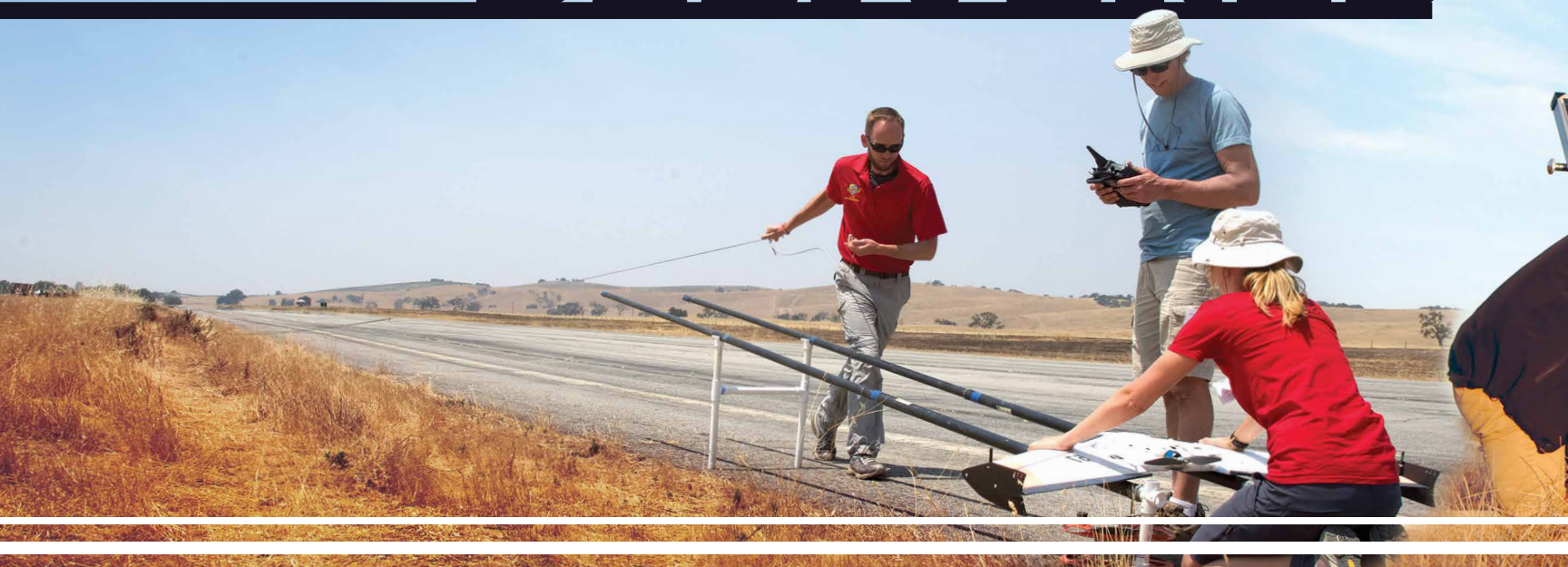
unique environment NPS and its faculty provide, all thrive in the physical space. But now, as was the rest of world, NPS was required to adapt these aspects for the virtual plane to properly serve our students and provide the best education possible.

In less than two weeks, NPS moved all classwork, with the exception of classified studies, for the roughly 1,500 on-campus students to a virtual setting using online collaboration tools that are now household names to ensure the teamwork found in the classroom continued. Faculty and students did not break stride and continued to complete coursework and theses required to graduate and join the masses of alumni who use their education to advance their service to the nation. Over three

academic quarters in 2020 impacted by the pandemic, NPS accomplished its mission, producing the same 958 graduates, including 73 international students, as it would have before the world was forced to respond to COVID-19. ■



ADVANTAGE DELIVERED



Decisive advantage at sea will likely go to the power with officers who are better educated, critical thinkers who have mastered the intricacies of their combat systems. The Meyer Scholar program is doing its part to produce those officers.

Capt. John Hammerer, USN [Ret.]
Chair, Integrated Air and Missile Defense.

Since 1909, the Naval Postgraduate School has been a national leader in research and education of the cutting-edge, defense technologies of the day. In order to execute this mission, security is weaved into every critical function of mission execution.

Behind its iron fences lies an institution that is uniquely capable of performing classified education and research programs for appropriate communities, essential in order to maintain the nation's edge in modern Great Power Competition. On campus, there is likely no university in the nation with its faculty and student population more well-informed in operational security, protecting the deep knowledge that is explored at NPS. In addition, some of the university's small but unique facilities



provide a one-of-a-kind environment for secure studies and experimentation.

Programs like NPS' Joint Interagency Field Experimentation [JIFX] also take advantage of unique regional facilities to advance the mission. JIFX allows defense, academic and industry collaborators—to innovators of new technologies—to engage with the NPS community at the nearby NPS Field Lab, where controlled airspace allows for expanded research in unmanned systems.

"Our experience has been outstanding," said Nathan Titus, Director of Government Programs for Autonodyne, a recent participant in JIFX. "The collaboration between ourselves and the different government agencies and vendors is a unique situation that we don't see anywhere else."

The Meyer Scholar Program is another program that furthers the education of U.S. DOD officers in an area of study few institutions could execute—Integrated Air and Missile Defense [IAMD]. These graduates are prepared to lead in the technical and operational challenges that face future operators in this space.

"Decisive advantage at sea will likely go to the power with officers who are better educated, critical thinkers who have mastered the intricacies of their combat systems," said retired Navy Capt. John Hammerer, the NPS Chair of Integrated Air and Missile Defense. "The Meyer Scholar program is doing its part to produce those officers." ■



2020 YEAR IN REVIEW

JAN

Two NPS graduates join the latest cohort of NASA's newest astronauts, the first under the Artemis program to return humans to the moon by 2024.

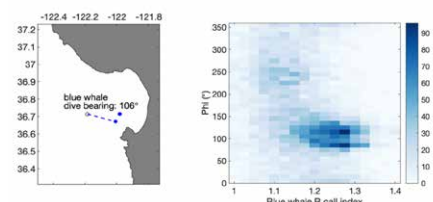
NPS hosts the first-ever Virtual RobotX or VRX competition, an international, university-level challenge designed to broaden students' exposure to autonomy and maritime robotic technologies.

The NPS CORE Lab develops an innovative application of social network analysis to ship tracking data, capturing the attention of NATO officials seeking regional maritime awareness.



FEB

NPS researchers use next-generation technology in their studies, such as cutting-edge underwater acoustic vector sensors able to deliver accurate directionality for tracking vessels, hostile submarines and marine mammals.



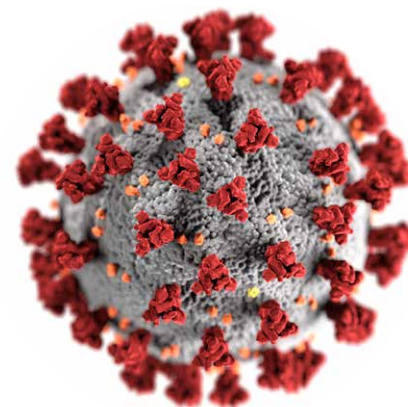
The university's Crew Endurance Team adds to more fleetwide changes in watchbill rotations by studying sleep quality via onboard research on the guided-missile destroyer USS Paul Hamilton.

To advance DOD research, NPS hosts a workshop to understand the dynamics of large, adversarial xSwarms, especially as their size, autonomy and capability rapidly increase over time.

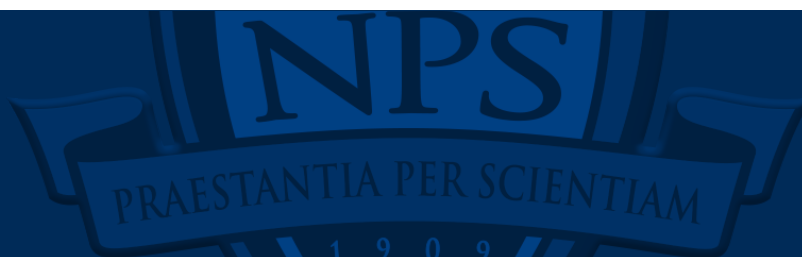
MAR

NPS programs are once again highly ranked in "U.S. News and World Reports" annual rankings of graduate programs across the nation, including a #1 overall ranking in a specialized category of programs in Homeland Security and Emergency Management. Programs in public affairs and engineering also performed favorably in the highly-respected rankings.

In response to the COVID-19 crisis, the university pivots to a telework status, moves swiftly to convert all Spring classes to an online format, and virtually produces its winter graduation ceremony and campus town halls.



While performing critical research on turbulence in the atmosphere-ocean boundary, NPS faculty discover a discrepancy in the distribution of energy of the air movement above the ocean surface that demonstrates a potential contradiction to Kolmogorov's widely known and accepted -5/3 power law.



APR

Dr. Jenni Heissel is awarded a prestigious grant from the Robert Wood Johnson Foundation's Evidence for Action program to pursue research into DOD parental support policies, hoping to shape the health and well-being of military families and the American public for generations.

NPS students take third place in the 2020 NASPAA-Batten Student Simulation Global Competition for their efforts in managing a city's sustainable public transit system.



Army Maj. Trisha Wyman's thesis on a Russian campaign to shape U.S. perceptions on nuclear capabilities garners significant attention, and is part of further research in Wyman's follow-up assignment as a Visiting Scientist at Lawrence Livermore National Lab.

MAY

As part of the expansion of the Navy's innovative approach to rapid acquisition processes and expanding networks, NPS becomes a central component and member of the **NavalX Tech Bridge** community with the addition of the Central Coast location.

NPS Distinguished Professor files for a patent proposing a system for automated detection, classification and possible removal of foreign object debris (FOD) on a runway using multiple, small unmanned aerial systems flying in formation.

Students and faculty at NPS work together to create and donate thousands of 3D-printed face shields to help flatten the curve of COVID-19.

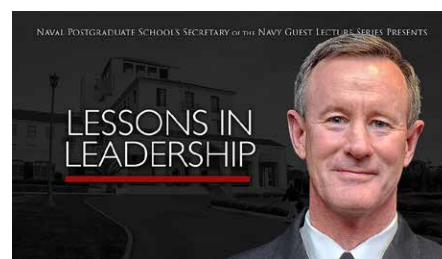


JUN

NPS takes its annual **Secretary of the Navy Guest Lecture** program virtual, launching a monthly series of online lectures with leading defense experts and leaders, such as retired **Adms. Mike Mullen and William McRaven**.

To enhance knowledge and skills across the DOD in the area of unmanned systems, NPS develops the foundation to offer a Robotics Engineering Certificate. The first four-course certificate program in Regional Security Studies also launches.

NPS virtually hosts its annual Big Ideas Exchange to explore new and potentially game-changing thinking developed by NPS faculty and students that address grand challenges in American national security.



2020 YEAR IN REVIEW

JUL

Chief of Naval Operations Adm. Michael Gilday holds his first-ever Virtual Town Hall for the campus, stressing the importance of maintaining advantage in the maritime, space and cyber environments and the Task Force One Navy effort to improve inclusion within the sea services.



NAVAL WARFARE
STUDIES INSTITUTE

NPS' new Naval Warfare Studies Institute [NWSI] launches the Emerging Technology Series, connecting senior military leaders, NPS faculty and students, and seasoned industry executives together to explore the implications of emerging technologies on warfighting and key operational problems.

Already the largest single contributor to the Defense Technical Information Center library, which supports all of the DOD, NPS receives its largest Unmanned & Robotics Systems Research Contract award.

AUG

The Library of Congress Federal Library and Information Network announces that Greta Marlatt, NPS Academic Support Manager at the Dudley Knox Library, is the 2019 recipient of the Federal Librarian of the Year Award.



Former NASA astronaut, aquanaut and NOAA Administrator, Dr. Kathy Sullivan shares her leadership journey as the **first American woman to walk in space and dive the deepest ocean** during a live-streamed Secretary of the Navy Guest Lecture.

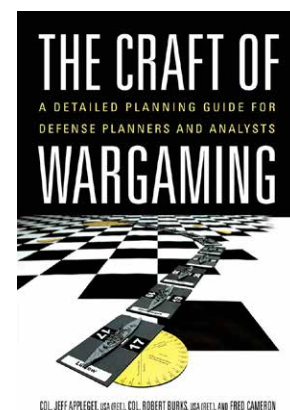
Associate Professor Gail Thomas continues NPS' support of the DON SAPRO team with an innovative approach to decreasing sexual assault through a series of judgement tests targeting 'Gray-Zone' behaviors.

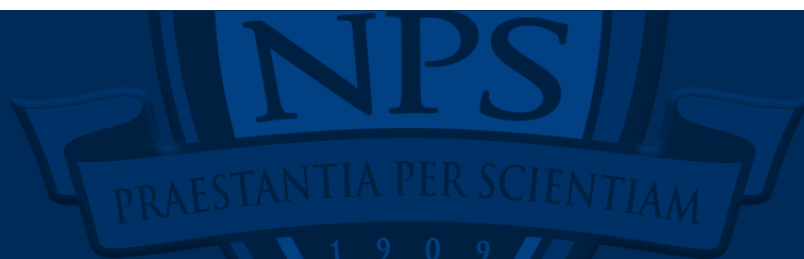
SEP

Secretary of the Navy Kenneth J. Braithwaite congratulates the 295 graduates, including 24 international students from 13 countries, in a keynote speech during the virtual commencement ceremony.

Operations Research professors publish their new book, "The Craft of Wargaming," which aggregates the nearly 100-year combined expertise of the three longtime leaders in the development and execution of wargaming.

NPS continues the development of education programs supporting broader awareness of Great Power Competition [GPC] with the development of a GPC certificate for both resident and distance learning students.





OCT

The U.S. Marine Corps' honors its first NPS technical graduate from a landmark PhD program designed to develop a cadre of strategic thinkers, technically-astute uniformed leaders necessary to create warfighter advantage in the modern, cognitive age.

NPS leads a project to streamline space technology among Five Eye (FVEY) countries by **sending into orbit by 2022 two CubeSats containing experimental technology created by NPS students** and New Zealand researchers.

NPS was reaccruited 10 years, the maximum achievable. WSCUC conducted the assessment, and selected NPS as one of eight institutions to pioneer the Thematic Pathway for Reaffirmation, reflecting the university's high-quality education/research programs, talented faculty and students.



NOV

Dr. Peter Denning leads the development of the Consortium for Intelligent Systems Education and Research (CISER) to advance the university's support to the Navy and Marine Corps in the critical areas of artificial intelligence, data science and machine learning.

NPS selects lauded scholar Dr. Scott Gartner to become its 16th Provost and Academic Dean in March 2021, following several years at Penn State University as the Director of its School of International Affairs and Affiliate Professorships in both the Department of Political Science and Penn State Law.



NPS researchers conduct 15 flights to collect various smoke samples from local wildfires to help the Navy better understand how smoke can affect optical and infrared sensor performance.

DEC

A new partnership between NPS and Woods Hole Oceanographic Institution is set to create a virtual undersea environment to advance future unmanned underwater vehicle development, leading to new and critical naval missions for these emerging systems.



Building upon previous research exploring strategies to counter **nefarious drone swarms, NPS researchers receive funding** for a new project to develop a comprehensive defensive playbook on how to defeat these broadly-utilized autonomous systems.

During his keynote speech, the 38th Commandant of the Marine Corps Gen. David H. Berger congratulates the 340 graduates, including 27 international students from 13 countries, and praises the intellectual power, critical thinking skills and adaptability of NPS alumni.

AY2020 MISSION MEASURES

Leadership

President: Vice Admiral Ann E. Rondeau, USN [Ret]
Provost: Dr. Steven R. Lerman/ Dr. Robert Dell [Acting Provost]
Chief of Staff: CAPT Philip Old, USN
Dean of Students: CAPT Markus J. Gudmundsson, USN
Dean of GSDM: Dr. Keith Snider
Dean of GSEAS: Dr. Clyde Scandrett
Dean of GSOIS: Dr. Robert Dell/Dr. Daniel Boger [Acting Dean]
Dean of IDS: Dr. James Wirtz
Dean of Research: Dr. Jeffrey Paduan
Vice Provost: Dr. Douglas Moses

2020 Student Engagement

1,480 RESIDENT DEGREE
866 DISTANCE LEARNING DEGREE
425 CERTIFICATE/NON-DEGREE
13,295 EE/PD*

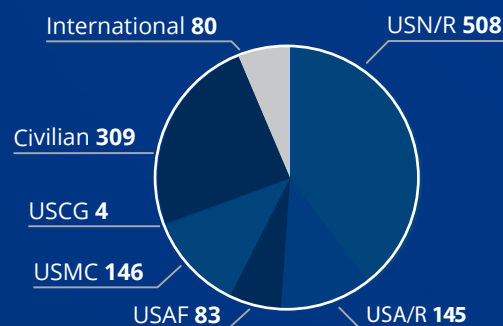
16,066
total engagement

2020 Degrees Awarded

1,259 MASTER DEGREES
16 DOCTORATE

1,275

NPS Graduate Degrees Conferred by Service



* EE/PD = Executive Education/Professional Development

Faculty & Staff

230 Tenure Track Faculty

Non Tenure Track Faculty:

162 Instructional Faculty

178 Research Faculty

18 Administrative Faculty

328 Staff

Sponsored / Reimbursable

- Approx **\$101 million** in sponsored/reimbursable funding expended
- Research programs are aligned to NPS curricula
- NPS research is valuable to improving the security of the U.S.

Financials

- **\$105 million** Direct Authorization: without military salary
- **\$90 million** Reimbursable income

Academic Facilities

- 62 Classrooms that offer media technology
- 8 Classrooms with Video-Conferencing
- 4 FLEX Classrooms of the Future
- 4 Auditoria
- 48 Labs

Accreditation

- WASC Senior College and University Commission [WSCUC]
- Accreditation Board for Engineering and Technology [ABET]
- Association to Advance Collegiate Schools of Business [AACSB]
- Network of Schools of Public Policy, Affairs, and Administration [NASPAA]

Source: Office of Institutional Research

INSTITUTIONAL RESEARCH

NAVAL POSTGRADUATE SCHOOL
IR@nps.edu • 1 University Circle, Monterey, CA 93943

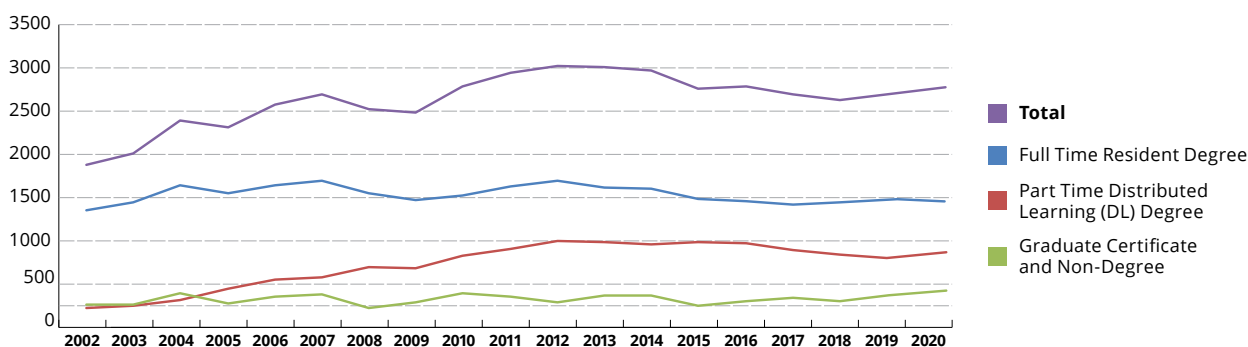
STUDENTS & PROGRAMS



NPS STUDENTS and PROGRAMS

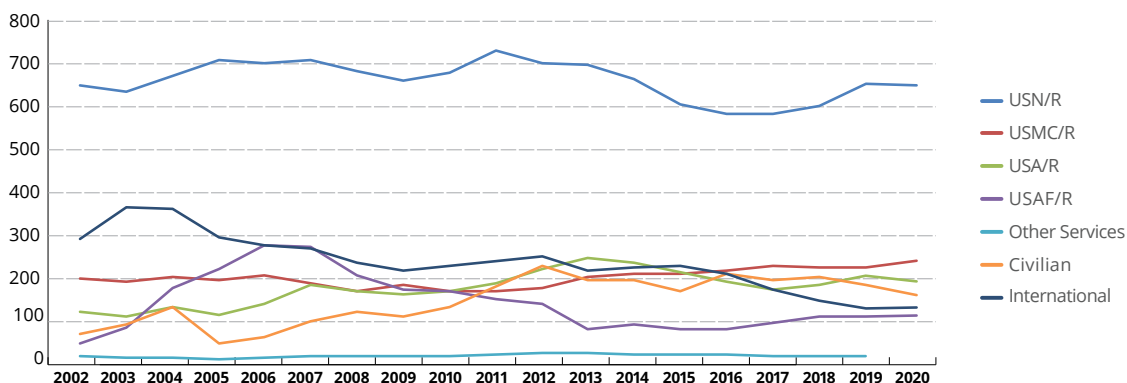
Graduate Program Students

By Type of Enrollment



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Full Time Resident Degree	1,366	1,464	1,660	1,563	1,649	1,707	1,565	1,487	1,536	1,647	1,712	1,633	1,616	1,494	1,479	1,432	1,459	1,497	1,480
Part Time Distributed Learning (DL) Degree	238	264	336	467	566	599	718	705	839	920	1,013	1,000	977	997	989	909	853	820	866
Graduate Certificate and Non-Degree	287	289	410	293	368	398	249	304	414	377	307	385	385	276	326	356	327	387	425
Total	1,891	2,017	2,405	2,324	2,584	2,704	2,531	2,496	2,789	2,944	3,031	3,018	2,979	2,767	2,794	2,697	2,639	2,704	2,771

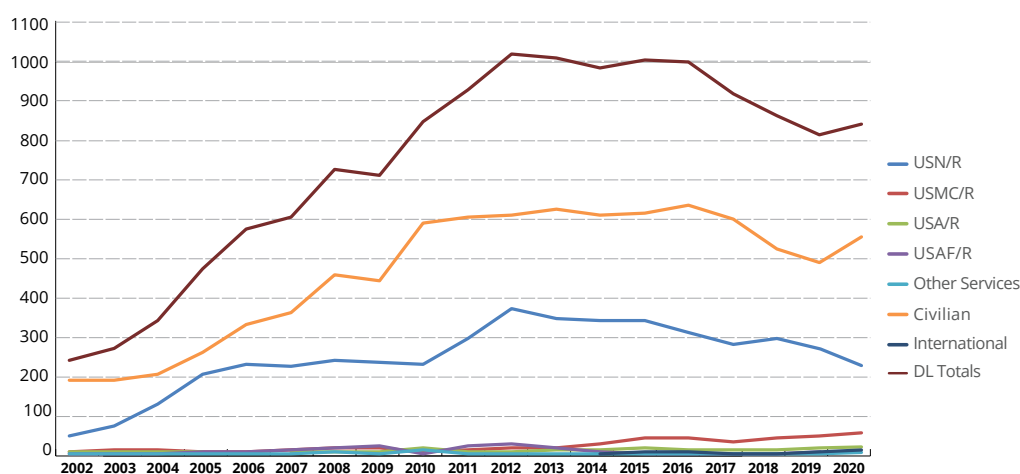
Resident Degree Students by Service



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
USN/R	648	636	671	709	702	708	685	660	681	731	700	698	666	606	581	582	600	655	649
USMC/R	195	186	198	192	201	183	163	178	164	165	173	199	207	205	213	223	222	221	244
USA/R	115	106	126	110	134	179	163	157	165	182	216	242	231	207	187	169	179	201	189
USAF/R	43	80	172	217	274	269	201	167	166	145	133	74	86	74	73	88	105	106	108
Other Services	13	9	7	5	9	11	10	10	10	15	19	19	15	14	14	11	10	10	9
Civilian	63	86	126	41	56	92	114	103	127	174	223	192	191	166	204	192	199	181	155
Int'l	289	361	360	290	274	266	230	213	224	235	248	211	222	222	207	167	144	123	125
Total	1,366	1,464	1,660	1,563	1,649	1,707	1,565	1,487	1,536	1,647	1,712	1,633	1,616	1,494	1,479	1,432	1,459	1,497	1,480

Numbers may not sum to total due to rounding.

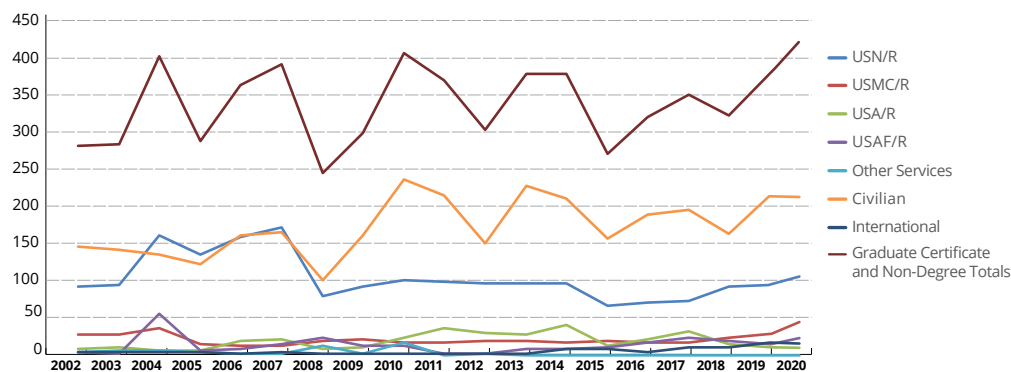
Distance Learning Degree Students by Service



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
USN/R	44	68	124	199	226	220	234	232	226	291	366	343	335	335	306	277	291	277	256
USMC/R	3	7	7	6	7	11	12	13	4	9	16	17	26	39	39	31	37	43	53
USA/R	4	5	3	2	0	2	4	3	17	4	5	7	8	12	11	8	8	13	14
USAF/R	0	0	0	3	5	10	15	18	0	20	22	14	6	1	1	1	0	2	2
Other Services	0	1	0	0	1	1	2	1	11	0	0	0	0	0	0	0	0	0	0
Civilian	186	184	202	257	328	355	451	438	582	597	605	620	601	608	630	592	517	484	540
International	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	1	2	1
Total	238	264	336	467	566	599	718	705	839	920	1,013	1,000	977	997	989	909	853	820	866

Average on Board Student Population

Graduate Certificate and Non-Degree Students by Service



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
USN/R	93	96	163	137	161	175	80	93	103	100	99	97	98	68	72	74	94	96	111
USMC/R	27	28	37	14	12	13	20	22	17	18	20	20	17	20	18	17	24	28	45
USA/R	9	11	7	6	20	22	8	11	24	36	31	27	40	12	22	32	15	11	8
USAF/R	3	1	58	6	9	16	24	13	13	2	1	8	9	10	17	24	19	15	28
Other Services	3	6	5	3	3	1	13	2	17	1	1	0	0	0	0	0	0	1	1
Civilian	148	144	137	124	164	167	103	163	241	219	153	231	214	158	192	199	166	219	218
International	4	4	5	4	1	5	1	1	1	2	2	2	7	8	5	10	11	18	14
Graduate Certificate and Non-Degree Totals	287	289	410	293	368	398	249	304	414	377	307	385	385	276	326	356	327	387	425

Numbers may not sum to total due to rounding.

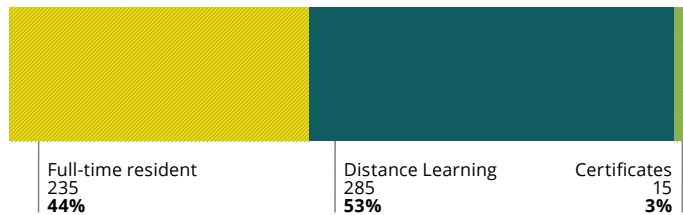
Graduate Program Students

By School — Average on Board 2020

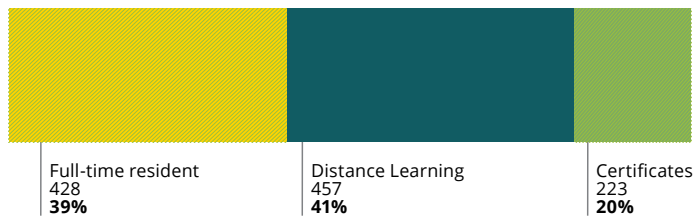
NPS (total 2771)



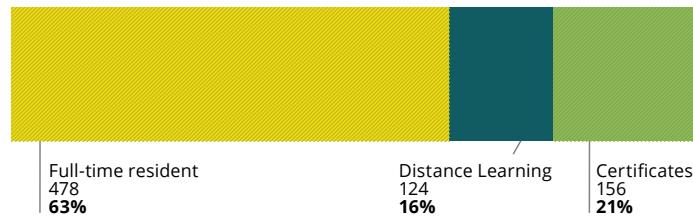
GSDM (total 535)



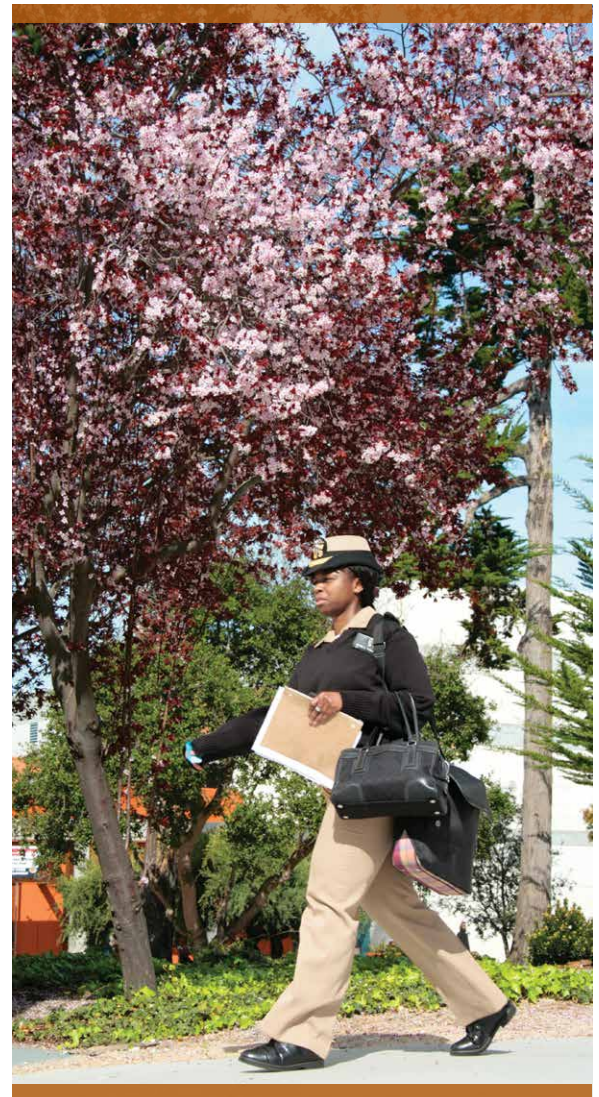
GSEAS (total 1107)*



GSOIS (total 759)



IDS (total 349)



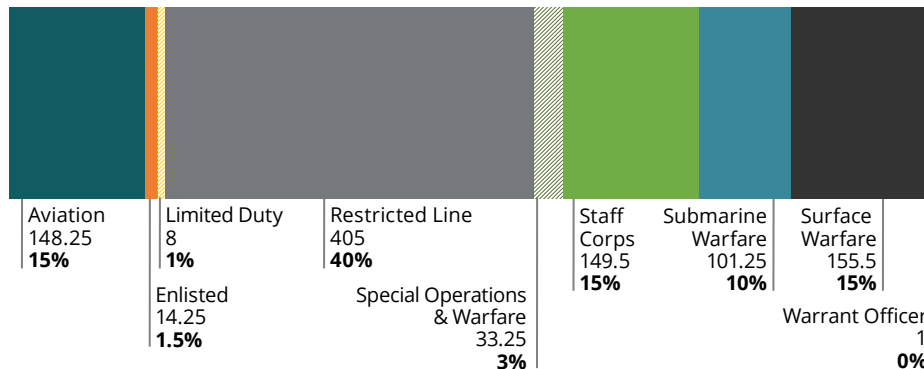
Numbers may not sum to total due to rounding.
* SE/OR Students are reflected under GSEAS

Graduate Program Students

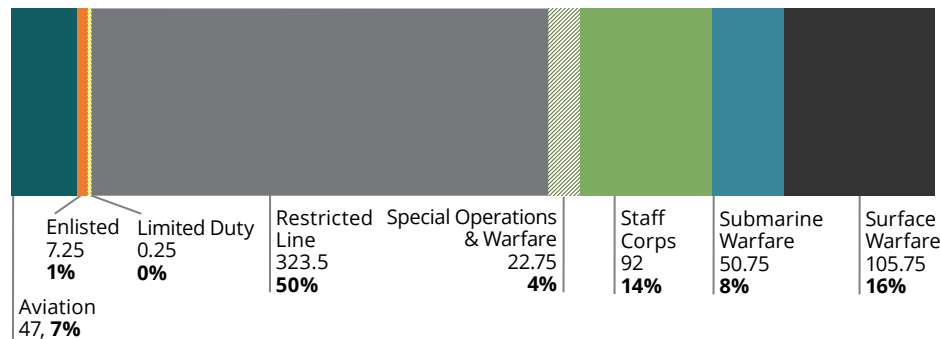
By USN/R Community — Average on Board 2020



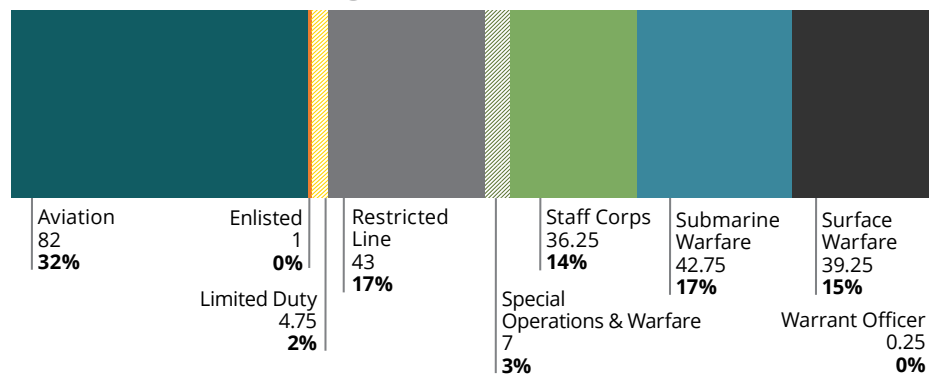
TOTAL USN/R Communities (total 1016)



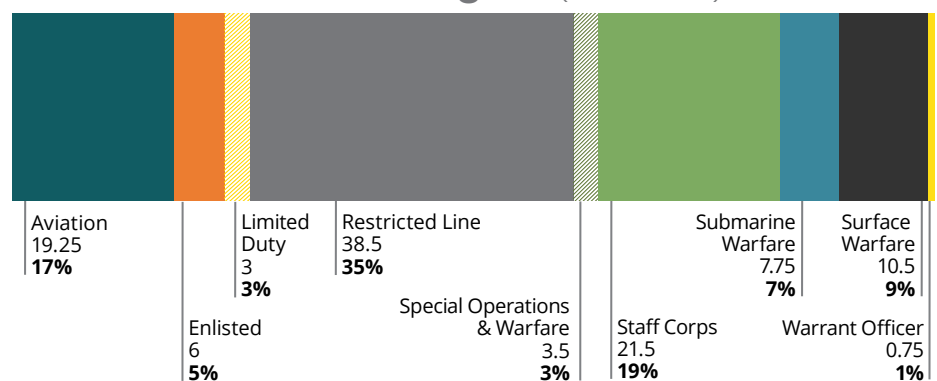
Full-time Resident (total 649)



Distance Learning (total 256)



Certificates & Non Degree (total 111)



Numbers may not sum to total due to rounding.

International Resident Degree Students

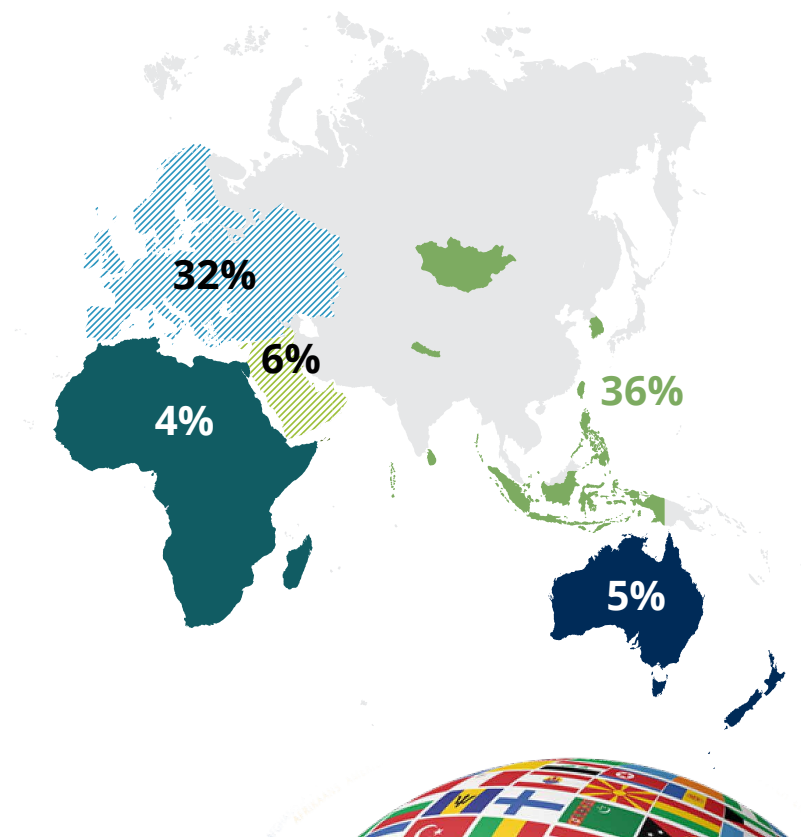
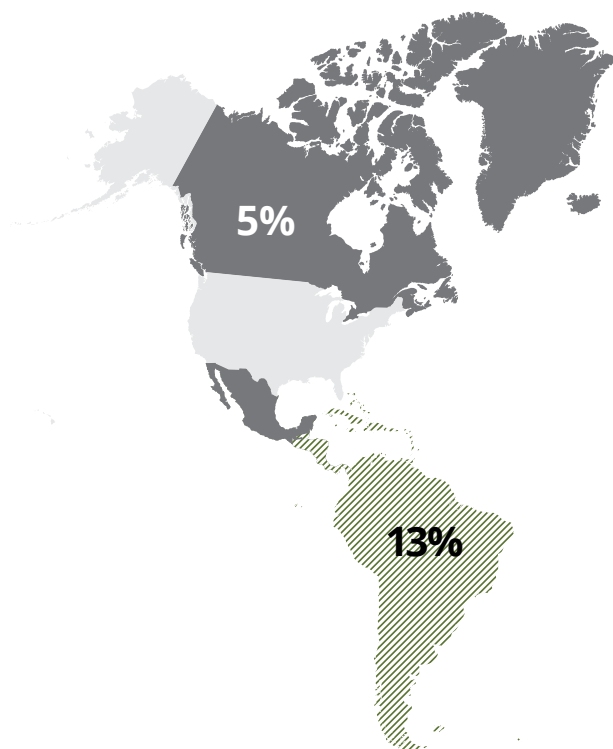
By Region — Average on Board 2020

Australia and New Zealand	
Australia	5.75
Total	6
North America	
Canada	3.75
Mexico	2
Total	6
Central/East Asia and Middle East	
Bahrain	1
Iraq	0.5
Israel	1
Jordan	0.75
Lebanon	1
Saudi Arabia	3.75
Total	8

Africa	
Niger	1
Nigeria	1
Sierra Leone	1.75
Uganda	1.25
Total	5
Caribbean, Central and South America	
Brazil	10
Chile	1
Colombia	1.5
Costa Rica	0.5
Guyana	0.75
Peru	2
Total	16

Europe	
Armenia	0.75
Bulgaria	0.25
Denmark	0.75
Estonia	0.75
Finland	0.5
Georgia	3.5
Germany	9
Greece	10.25
Hungary	1.75
Lithuania	0.75
Netherlands	1.5
Norway	2
Portugal	1
Romania	1
Slovakia	0.75
Sweden	3.75
Switzerland	0.25
Turkey	0.5
Ukraine	1
Total	40

Far/Near East	
Indonesia	3.5
Korea	7.25
Maldives	1
Mongolia	1.25
Nepal	2.25
Philippines	6
Singapore	18.5
Sri Lanka	0.25
Taiwan	4.75
Thailand	0.25
Total	45



Numbers may not sum to total due to rounding.

Degree Students	
Africa	5
Caribbean, Central & South America	16
Central/East Asian & Middle East	8
Europe	40
Far/Near East	45
Australia & New Zealand	6
North America	6
Total	125

Military officers from more than 110 allied nations have studied at the university, often bringing their families with them. The cultural exchange builds lifelong relationships between NPS' U.S. students and their international colleagues.



Graduate Degree Enrollment

Average on Board 2020



Resident Programs

	Curriculum Number	USN	USMC	Intl Military & Civilian	U.S. Civilian	Other Services	Grand Total
GSDM							
Acquisitions & Contract Management	815	25	14	2	0	30	71
Defense Systems Analysis	817	0	17	1	0	0	18
Defense Systems Management [International]	818	0	0	2	0	0	2
Financial Management	837	44	8	1	0	0	53
Financial Management [Energy Specialty]	838	1	0	0	0	0	1
Information Systems Management MBA	870	3	0	0	0	1	4
Manpower Systems Analysis	847	25	17	4	0	1	47
Materiel Logistics Support Management	827	9	9	1	0	0	19
Resource Planning/Mgmt for Int'l Defense	820	0	0	2	0	0	2
Supply Chain Management	819	13	0	1	0	0	14
Systems Acquisition Management	816	2	0	0	0	4	6
Transportation Management	814	0	<1	0	0	0	<1
GSDM Total		121	65	13	0	36	235
GSEAS							
Aerospace Engineering	609	8	0	0	0	1	9
Applied Mathematics	380	3	0	0	0	11	14
Applied Mathematics [PhD]	381	1	0	0	1	1	3
Combat Systems Science & Engineering	533	33	3	6	0	1	42
Electronic Systems Engineering	590	45	16	10	2	0	72
Electronic Systems Engineering [PhD]	594	6	0	0	0	0	6
Engineering Acoustics [PhD]	536	0	0	1	0	0	1
Meteorology	372	1	0	0	0	2	3
Meteorology [PhD]	387	1	0	0	1	0	2
Meteorology and Oceanography [METOC]	373	34	0	2	0	0	35
Naval/Mechanical Engineering	570	38	0	4	1	1	44
Naval/Mechanical Engineering - Energy Focus	563	1	0	0	0	0	1
Naval/Mechanical Engineering [PhD]	573	2	0	0	2	0	4
Oceanography	440	0	0	3	0	0	3
Oceanography [PhD]	443	2	0	1	0	0	3
Operational Oceanography	374	<1	0	0	0	0	<1
Space Systems Engineering	591	24	1	0	1	0	26
Space Systems Engineering [PhD]	597	0	0	0	2	0	2
Space Systems Operations	366	16	12	0	0	3	30
Systems Engineering	580	23	0	5	0	3	30
Systems Engineering [PhD]	581	1	0	0	2	0	3
Systems Engineering Analysis**	308	9	0	1	0	0	10
Systems Engineering Management - System Acquisition	522	0	0	0	0	58	58
Undersea Warfare	525	20	0	0	0	0	20
Undersea Warfare [International]	526	0	0	7	0	0	7
GSEAS Total		266	31	39	12	80	428

Numbers may not sum to total due to rounding.

Graduate Degree Enrollment *continued*

Resident Programs	Curriculum Number	USN	USMC	Intl Military & Civilian	U.S. Civilian	Other Services	Grand Total
GSOIS							
Applied Cyber Operations	336	6	3	0	0	0	9
Computer Science	368	33	23	7	18	1	82
Computer Science [PhD]	384	1	0	0	0	0	1
Cyber Systems and Operations	326	40	1	0	0	1	42
Human Systems Integration	362	0	0	1	0	1	2
Information Sciences [PhD]	474	0	2	1	2	1	6
Information Strategy and Political Warfare	698	0	0	0	1	16	17
Information Systems & Technology	370	0	26	0	0	0	26
Information Warfare	595	0	21	0	0	0	21
Joint Cmd, Cntrl, Comm, Comp/Intel [C4I] Sys	365	0	5	1	0	1	6
Modeling, Virtual Environments & Simulation	399	0	9	4	0	1	15
Modeling, Virtual Environments & Simulation [PhD]	398	1	1	0	0	1	3
Network Operations and Technology	386	30	0	0	0	1	31
Operations Analysis	360	44	27	10	0	15	95
Operations Analysis [PhD]	382	0	2	0	0	0	2
Operations Research Logistics Analysis	361	14	0	0	0	1	15
Special Operations	699	18	1	21	0	66	106
GSOIS Total		186	120	45	21	107	478
IDS							
Civil-Military Relations	685	0	0	3	0	0	3
Combating Terrorism: Policy and Strategy	693	0	0	14	1	0	15
Europe and Eurasia	684	10	8	2	1	14	33
Far East, Southeast Asia, Pacific	682	18	11	1	1	16	45
Homeland Defense and Security	692	0	0	0	120	4	124
Homeland Security and Defense	691	12	0	1	0	5	18
Middle East, South Asia, Sub-Saharan Africa	681	16	6	1	0	22	45
Security Studies [PhD]	694	0	0	1	1	3	5
Strategic Studies	688	8	0	6	0	2	15
Western Hemisphere	683	14	4	0	0	18	36
IDS Total		76	28	29	123	83	339
RESIDENT TOTAL		649	244	125	155	306	1480

* Numbers may not sum to total due to rounding.

** Systems Engineering Analysis is an interdisciplinary curriculum shared by GSEAS & GSOIS, but it is listed here under GSEAS for simplicity.



Graduate Degree Enrollment *continued*

Distance Learning & Hybrid Programs

	Curriculum Number	USN	USMC	Intl Military & Civilian	U.S. Civilian	Other Services	Grand Total
GSDM							
Contract Management [DL]	835	4	2	0	50	7	62
Executive Master of Business Administration [DL]	805	106	17	0	0	0	123
Executive Master of Business Administration[DL-Civ]	807	0	0	0	64	0	64
Program Management [DL]	836	6	9	0	22	0	37
GSDM Total		115	28	0	136	7	285
GSEAS							
Aerospace Engineering [DL]	608	1	1	0	4	1	7
Aviation Systems Engineering [DL]	312	15	6	0	2	8	30
Electronic Systems Engineering [DL]	592	0	0	0	62	0	62
Mechanical Engrg for Nuclear Trained Officers [DL]	572	39	0	0	0	0	39
Naval Test Pilot/Mechanical & Aerospace Engineering Program [DL]	613	10	3	0	0	0	13
Reactors - Mechanical/Electrical Engineering [DL]	571	16	0	0	0	0	16
Systems Engineering [DL]	311	7	4	0	182	0	194
Systems Engineering [PhD] [Hybrid]	582	0	0	0	13	0	13
Systems Engineering Management - Systems and Program Management [DL]	722	0	0	0	39	0	39
Systems Engineering Management-PD21 [DL]	721	4	0	0	23	1	28
Underwater Acoustic Systems [DL]	535	3	0	0	14	0	16
GSEAS Total		94	15	0	339	10	457
GSOIS							
Cost Estimating and Analysis [DL]	379	1	0	1	39	0	41
Human Systems Integration [DL]	359	13	6	0	5	0	23
Information Sciences [PhD] [Hybrid]	473	0	0	0	14	0	14
Systems Analysis [DL]	363	34	5	0	8	0	47
GSOIS Total		47	11	1	65	0	124
DL Total		256	53	1	540	16	866



Graduate Degrees Conferred

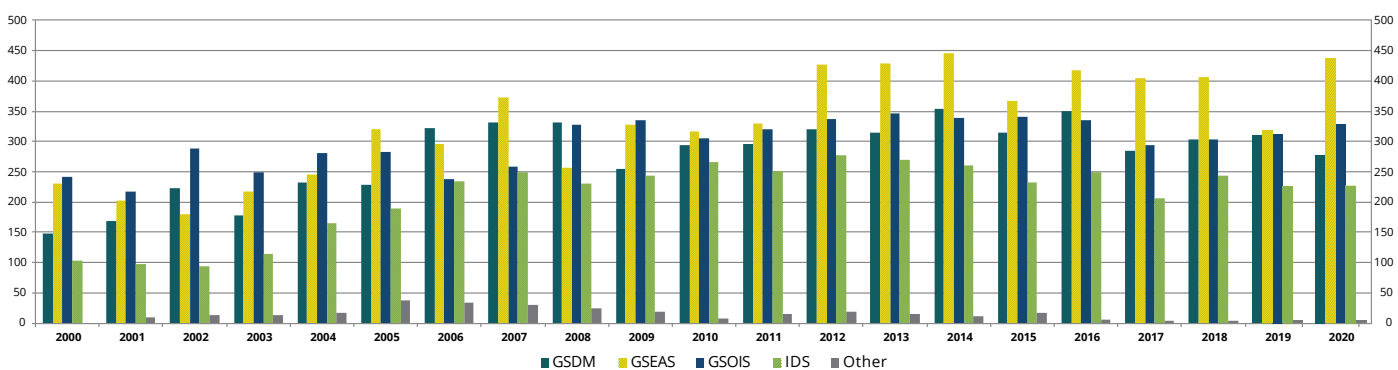
Graduate School of Defense Management	274
EMBA Executive Master of Business Administration	96
MBA Master of Business Administration	116
MS Contract Management	15
MS Management	38
MS Program Management	9
Graduate School of Engineering and Applied Sciences	439
EAAC – ENGINEERING ACOUSTICS ACADEMIC COMMITTEE	8
MS Engineering Acoustics	7
PhD Engineering Acoustics	1
ECE – ELECTRICAL AND COMPUTER ENGINEERING	66
MEng Electrical Engineering	28
MS Electrical Engineering	32
MS Engineering Science [Electrical Engineering]	3
PhD Electrical Engineering	3
MA – APPLIED MATHEMATICS	13
MS Applied Mathematics	13
MAE – MECHANICAL AND AEROSPACE ENGINEERING	79
MS Astronautical Engineering	9
MS Engineering Science [Aerospace Engineering]	16
MS Engineering Science [Astronautical Engineering]	1
MS Engineering Science [Mechanical Engineering]	21
MS Mechanical Engineering	29
PhD Astronautical Engineering	1
PhD Mechanical Engineering	2
MR – METEOROLOGY	8
MS Meteorology	2
MS Meteorology and Physical Oceanography	6
OC – OCEANOGRAPHY	15
MS Meteorology and Physical Oceanography	11
MS Physical Oceanography	4
PH – PHYSICS	32
MS Applied Physics	24
MS Physics	7
PhD Applied Physics	1
SE – SYSTEMS ENGINEERING	202
MS Engineering Systems	18
MS Systems Engineering	112
MS Systems Engineering Management	71
PhD Systems Engineering	1
SP – SPACE SYSTEMS ACADEMIC GROUP	16
MS Space Systems Operations	16
Graduate School of Operational and Information Sciences	327
CS – COMPUTER SCIENCE	60
MS Computer Science	52
MS Modeling, Virtual Environments and Simulation	6
PhD Modeling, Virtual Environments and Simulation	2
DA – DEFENSE ANALYSIS	101
MS Defense Analysis [Financial Management]	1
MS Defense Analysis [Irregular Warfare]	78
MS Defense Analysis [National Security Affairs]	2
MS Information Strategy and Political Warfare	20
IS – INFORMATION SCIENCES	61
MS Applied Cyber Operations	7

Graduate Degrees Conferred *continued*



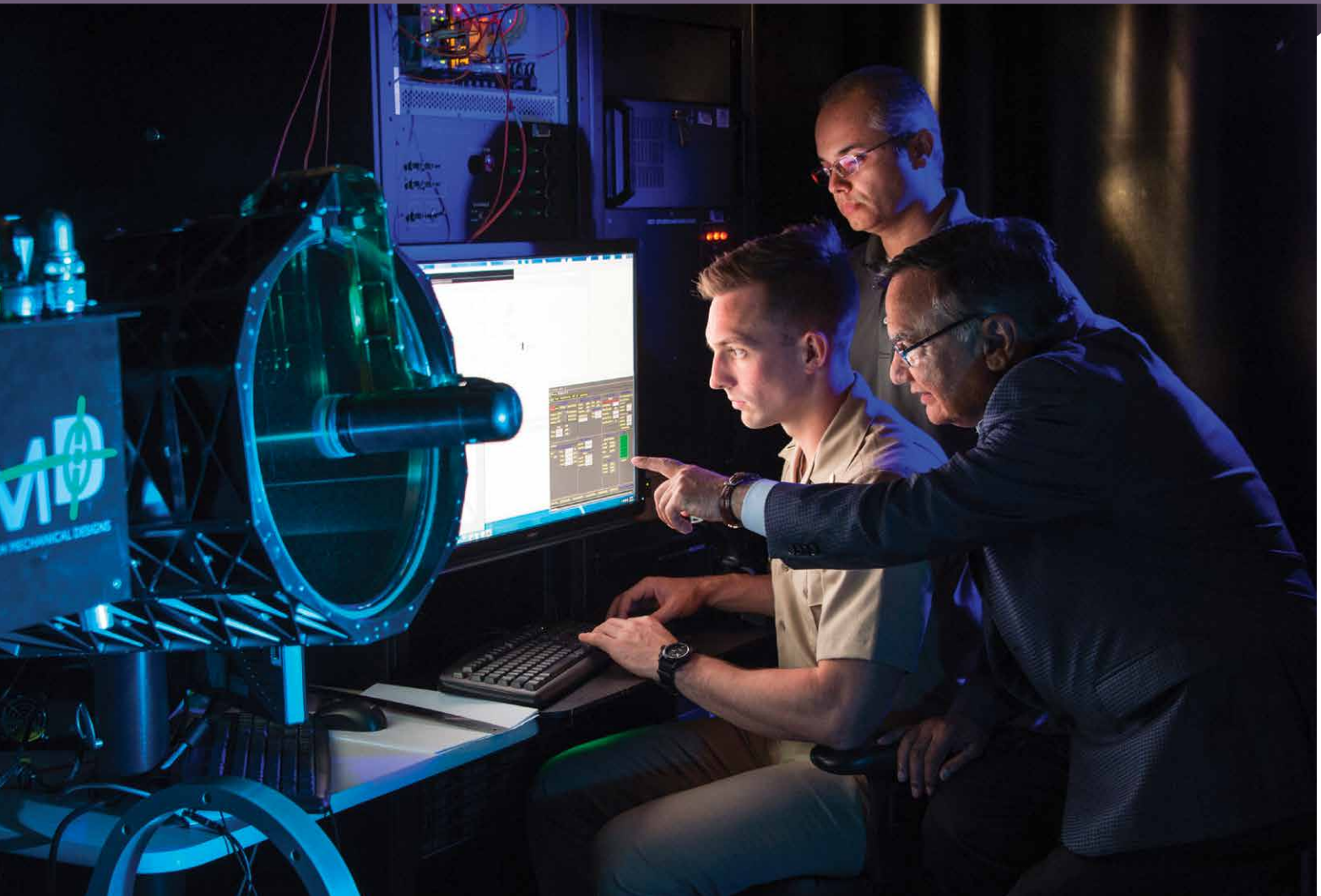
MS Cyber Systems and Operations	13
MS Information Technology Management	9
MS Information Warfare Systems Engineering	10
MS Network Operations and Technology	18
MS Systems Technology [Command, Control, and Communications]	3
PhD Information Sciences	1
OR – OPERATIONS RESEARCH	105
M Cost Estimating and Analysis	17
M Human Systems Integration	9
M Systems Analysis	18
MS Applied Science [Operations Research]	3
MS Human Systems Integration	1
MS Operations Research	56
PhD Operations Research	1
Graduate School of International and Defense Studies	228
NSA – NATIONAL SECURITY AFFAIRS	228
MA Security Studies [Civil-Military Relations]	1
MA Security Studies [Combating Terrorism: Policy and Strategy]	7
MA Security Studies [Europe and Eurasia]	25
MA Security Studies [Far East, SE Asia, the Pacific]	36
MA Security Studies [Homeland Security and Defense]	87
MA Security Studies [Middle East, South Asia, Sub-Saharan Africa]	30
MA Security Studies [Strategic Studies]	16
MA Security Studies [Western Hemisphere]	23
PhD Security Studies	3
Provost Oversight	7
MS Systems Engineering	4
MS Systems Engineering Analysis	3
NPS TOTAL	1275

Degrees Conferred by Academic School



SCHOOLS	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
GSDM	148	169	223	177	233	229	322	331	331	255	293	295	321	315	354	315	351	285	303	310	274
GSEAS	231	202	179	217	245	320	295	372	257	328	317	329	426	428	446	366	418	404	407	312	439
GSOIS	241	217	289	249	280	282	237	259	327	335	305	321	337	346	338	340	335	294	303	314	327
IDS	103	98	93	115	165	190	234	249	230	243	265	250	277	269	261	232	249	206	243	227	228
Other	-	10	14	13	17	38	34	30	25	18	8	15	18	15	12	16	5	4	4	6	7
Total	723	696	798	771	940	1,059	1,122	1,241	1,170	1,179	1,188	1,210	1,379	1,373	1,411	1,269	1,358	1,193	1,260	1,169	1,275

RESEARCH and SPONSORED PROGRAMS



Defense-Focused Research Centers

Several Research Centers of Excellence have been established at NPS under the auspices of the Associate Provost and Dean of Research as per NPSINST 3900.2B. A Research Center is a group of faculty/staff with a significant concentration of expertise in a particular area normally with an emphasis on applications. [Research centers receive no funding from the Navy mission budget: they serve to organize and promote interdisciplinary experts around a common theme.] Every Research Center supports the NPS educational mission and displays a clear benefit to NPS, the Navy and/or DoD.

- Aerodynamic Decelerator Systems Center [ADSC]
- Center for Additive Manufacturing
- Center for Autonomous Vehicle Research [CAVR]
- Center for Cyber Warfare
- Center for Cybersecurity and Cyber Operations [C3O]
- Center for Infrastructure Defense [CID]
- Center for Joint Services Electronic Warfare
- Center for Materials Research [CMR]
- Center for Multi-INT Studies [CMIS]
- Center for Network Innovation and Experimentation [CENETIX]
- Center on Combating Hybrid Threats [CCHT]
- Center on Contemporary Conflict
- Common Operational Research Environment [CORE] Lab
- DOD Information Strategy Research Center
- Littoral Operations Center [LOC]
- Remote Sensing Center [RSC]
- SEED Center for Data Farming [Simulation Experiments & Efficient Designs]
- Spacecraft Research and Design Center [SRDC]
- TurboPropulsion Laboratory

RESEARCH and SPONSORED PROGRAMS

Program Overview

The Naval Postgraduate School [NPS] has robust sponsored research and education programs. Per U.S. code, Title 10 — 8541, NPS will “... provide advanced instruction and professional and technical education and research opportunities...” Sponsored programs [research, education, and professional development] are integral to the Naval Postgraduate School mission. The research programs support graduate education by providing militarily relevant thesis topics that address issues from the current needs of the Fleet and Joint Forces to the science and technology required to sustain long-term superiority of the Navy/DoD. Research varies from the fundamental to the applied and covers all levels of classification. Sponsored research includes:

- Basic and Applied Research
- Individual and Interdisciplinary Group Projects
- Fleet Support
- Cooperative Research and Development Agreements

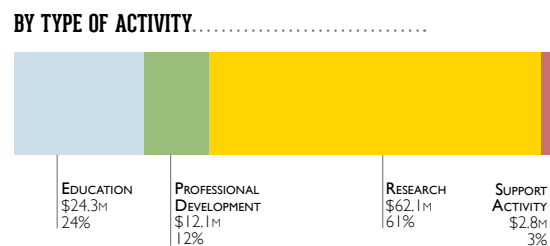
Sponsored education programs include integrated graduate education and research in space systems, total-ship systems engineering, combat systems, systems engineering and homeland security and defense, supplemented by off-campus graduate and certificate programs.

Professional development programs utilize NPS faculty expertise and student experience to support various communities within the Navy and DoD through short courses and web-based services.

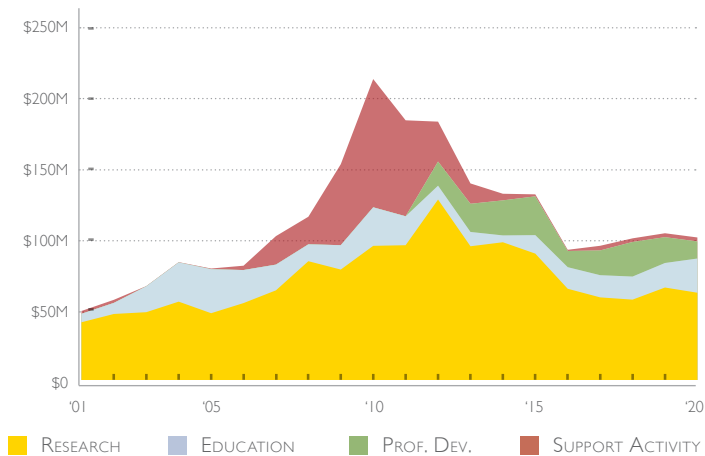
In FY20, NPS had total expenditures exceeding \$101.4M.



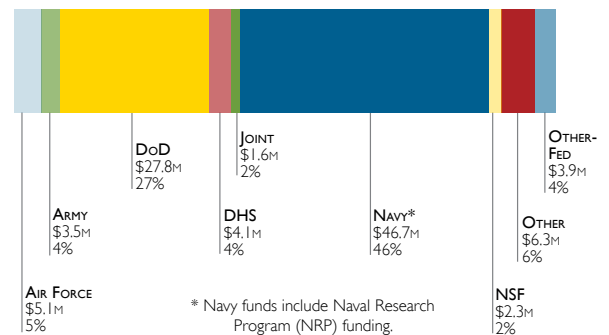
SPONSORED PROGRAM EXPENDITURES 1 OCTOBER 2019-30 SEPTEMBER 2020 Total Expenditures: \$101.4M



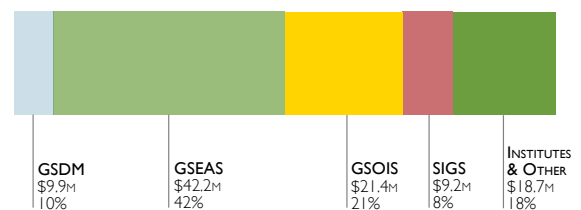
SPONSORED PROGRAM PROFILE FY 2001-2020 [Funds Expended]



BY SPONSOR



BY NPS ORGANIZATION



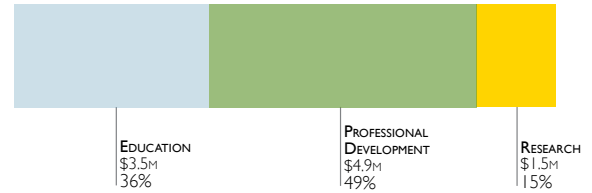
Graduate School of Defense Management

The Graduate School of Defense Management [formerly Graduate School of Business and Public Policy] offers unique residential defense-focused MBA and Master of Science in Management programs, plus master's degrees in four other DoD-relevant areas. Faculty research is an important component of the school and strives to support military and public policy decision making, problem solving, and policy setting; improve operational and administrative processes, and organizational effectiveness; contribute knowledge to academic disciplines; and advance the mission of graduate education. Faculty research results have been featured in general media, used in Congressional testimony and incorporated in public policy issues.

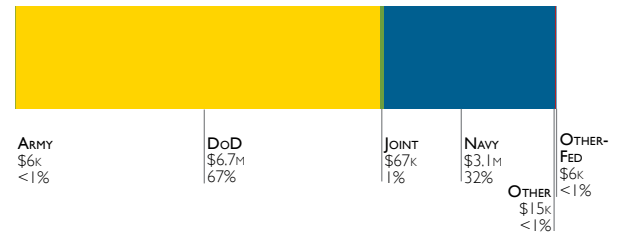
The research program is fully integrated into the educational process. Curriculum sponsors and other DoD organizations fund faculty research: students participate in these faculty projects and undertake research of their own in their capstone MBA projects, and faculty research results are incorporated into classroom instruction. Topics and issues can be grouped into five broad functional areas: acquisition program and contracting management; budgeting and financial management; operations and logistics management; economics and manpower systems analysis; and management and leadership, strategy and change, and communications.

TOTAL EXPENDITURES: \$9.9m

BY TYPE OF ACTIVITY.....



BY SPONSOR



BY DEPARTMENT

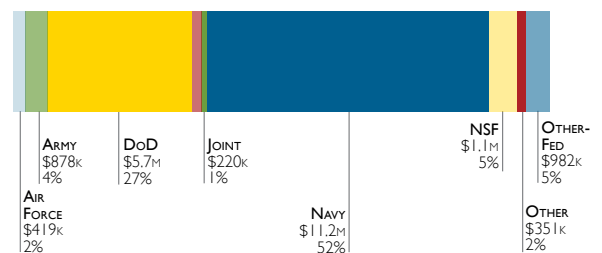


Graduate School of Operational and Informational Sciences

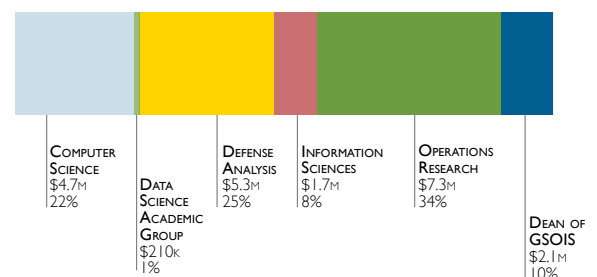
GSOIS resident and distance learning programs consist of 21 technical curricula that award master of science and Ph.D. degrees across four academic departments [Computer Science, Defense Analysis, Information Science, and Operations Research] and the Cyber Academic Group. Responding to the needs of naval and military customers, graduate education and research focus on important military domains: information science and technology; computer science; artificial intelligence; cyber systems and operations; operations analysis and operational logistics; data science; human-systems integration; and special operations. The emphasis of sponsored research is on the development, integration, and application of mathematical, scientific, and technical skills that contribute to advances and improvement in military systems and operations, and related areas of national defense and security.

TOTAL EXPENDITURES: \$20.4m

BY SPONSOR



BY DEPARTMENT



BY TYPE OF ACTIVITY.....



Graduate School of Engineering and Applied Sciences

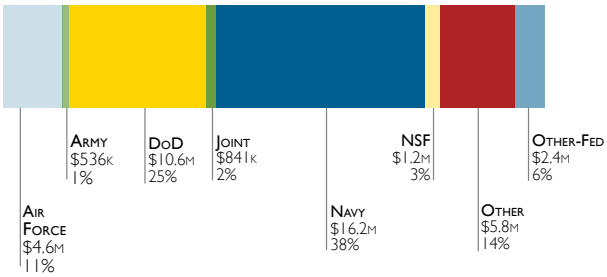
GSEAS education leads to the master of science, engineer, and doctor of philosophy degrees awarded by seven technical academic departments [applied math, electrical and computer engineering, mechanical and aerospace engineering, meteorology, physics, oceanography, systems engineering] and three interdisciplinary academic groups [space systems, undersea warfare, and energy]. These offer degree programs tailored to the Navy and defense community, while providing technical foundations for student theses interdisciplinary faculty and student research projects. Research centers and unique laboratory facilities [e.g., autonomous vehicle research, spacecraft research and design, remote sensing, rocket propulsion and combustion, electronic warfare & signal processing, ocean acoustics, atmospheric modelling & forecasting, multi-intelligence studies & data science, space-systems research, computer & communication networks, materials research, cyber warfare & cryptanalysis, undersea warfare, advanced sensors, and weapon effects & analysis] add rigor to the resident academic and sponsored programs.

TOTAL EXPENDITURES: \$42.2m

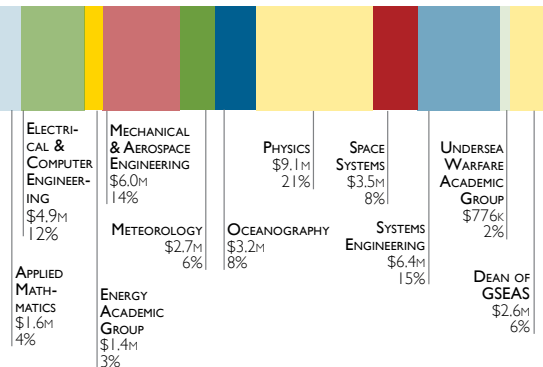
BY TYPE OF ACTIVITY



BY SPONSOR



BY DEPARTMENT



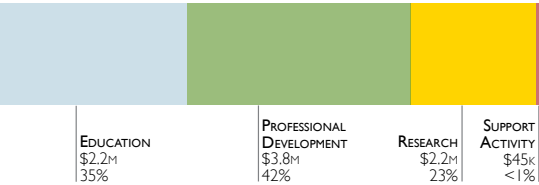
Graduate School of International and Defense Studies

The Graduate School of International and Defense Studies [IDS] specializes in research and graduate education focused on security studies, international relations, regional security and area studies, international political economy, and U.S. security policy. Programs identify and address security challenges, develop civilian and military interagency alliances, and strengthen multilateral and bilateral defense cooperation between the U.S. and other nations.

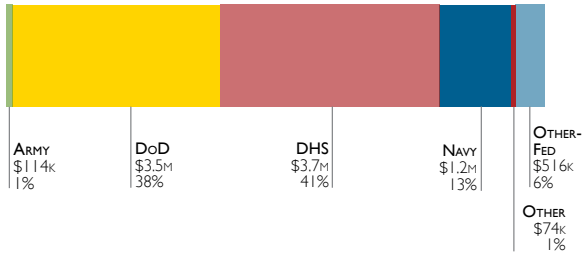
SIGS components include the department of National Security Affairs, Center for Homeland Defense and Security, and the International Graduate Programs Office.

TOTAL EXPENDITURES: \$9.2m

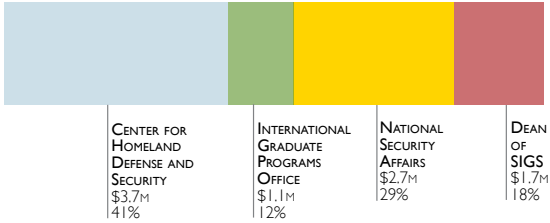
BY TYPE OF ACTIVITY



BY SPONSOR



BY DEPARTMENT



EXECUTIVE EDUCATION and PROFESSIONAL DEVELOPMENT



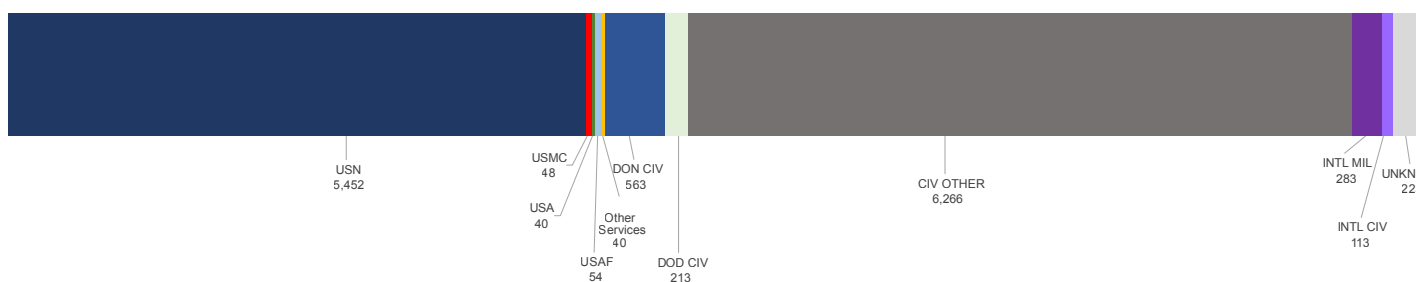
Executive Summary

The Naval Postgraduate School [NPS] extends world-class executive education and professional development [EE/PD] programs to mid-and senior-grade professionals who are unable to take the time out of their careers to attend degree programs, or who need targeted information at their locations on their time schedules. In addition to degree and certificate courses offered for credit, Schools, Centers, Departments, Institutes and other organizations of NPS provide executive education, numerous short courses, seminars, fly-away teams and conferences to meet specific sponsors' needs. NPS' short courses do not award academic credit, but selected short courses may award continuing education units [CEUs]. The primary organizations involved in EE/PD at NPS are:

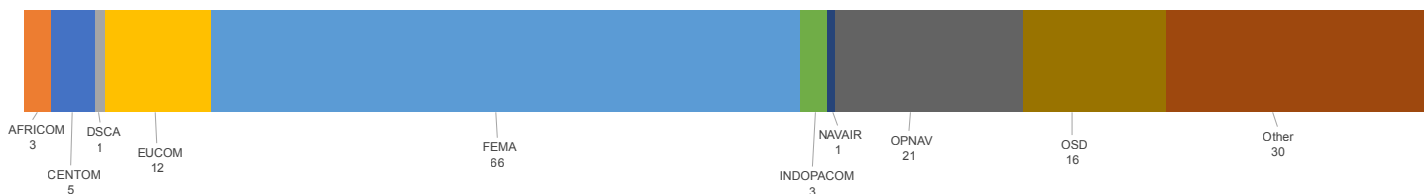


- Center for Executive Education
- Center for Homeland Defense and Security
- Center for Security Cooperation Support
- Defense Resources Management Institute
- Regional Security Education Program
- Academic Units [GSDM, EAG, IS, OR, SE]

TOTAL STUDENTS BY AFFILIATION
[13,295 Total Students]



TOTAL COURSES BY SPONSOR
[164 Total Courses]



COURSES BY ORGANIZATION
[164 Total Courses]



NPS FACULTY



NPS FACULTY

Faculty by Rank



Tenure Track

RANK	GSDM	GSEAS	GSOIS	IDS	RESEARCH	ADMIN	TOTAL
PROFESSOR	15	44	29	8	1	3	100
ASSOCIATE PROFESSOR	18	28	21	13	--	1	81
ASSISTANT PROFESSOR	13	14	18	4	--	--	49
TOTAL	46	86	68	25	1	4	230

Non-Tenure Track

RANK	GSDM	GSEAS	GSOIS	IDS	RESEARCH	ADMIN	TOTAL
SENIOR LECTURER	15	13	20	9	--	3	60
LECTURER	16	10	10	10	--	11	57
PROFESSOR OF THE PRACTICE	6	10	2	--	1	--	19
RESEARCH PROFESSOR	--	7	3	--	--	--	10
RESEARCH ASSOCIATE PROFESSOR	1	12	10	1	--	--	24
RESEARCH ASSISTANT PROFESSOR	1	10	2	1	--	1	15
ADMINISTRATIVE FACULTY	1	2	4	4	--	7	18
ASSOCIATE FACULTY	8	58	70	9	1	6	152
VISITING FACULTY	2	--	1	--	--	--	3
TOTAL	50	122	122	34	2	28	358
GRAND TOTAL	96	208	190	59	3	32	588

Graduate School of Defense Management (GSDM)
 Graduate School of Engineering and Applied Sciences (GSEAS)
 Graduate School of Operational and Information Sciences (GSOIS)
 Graduate School of International and Defense Studies (IDS)

NPS Faculty Distribution

	GSDM	GSEAS	GSOIS	IDS	RESEARCH	ADMIN	TOTAL
TENURE TRACK	46	86	68	25	1	4	230
NON-TENURE TRACK	50	122	122	34	2	28	358
TOTAL	96	208	190	59	3	32	588

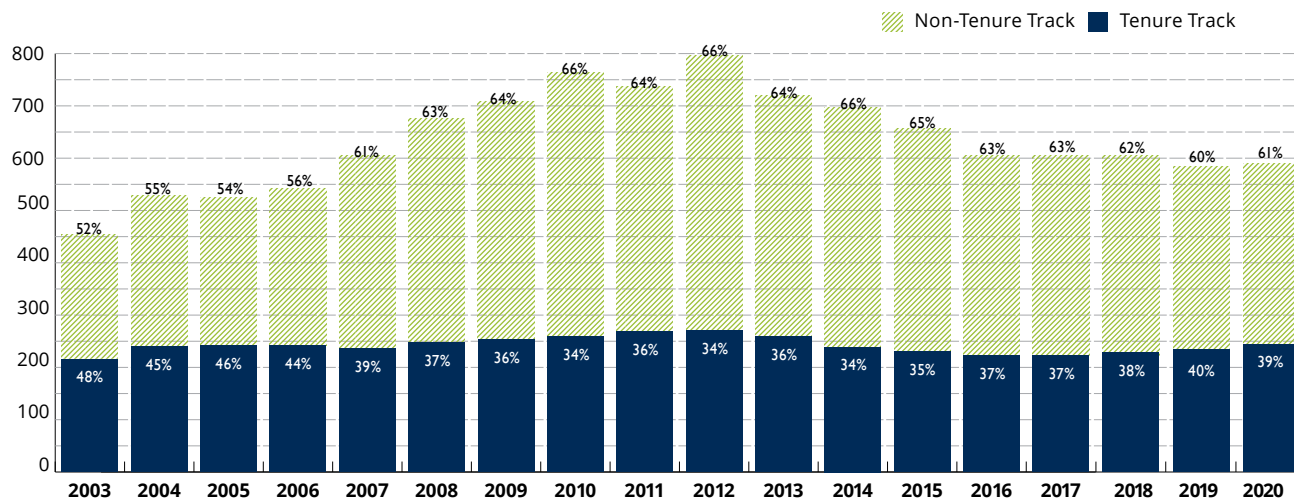
NPS Faculty Distribution

	GSDM	GSEAS	GSOIS	IDS	RESEARCH	ADMIN	TOTAL
	96	208	190	59	3	32	588
PERCENTAGE	16%	35%	32%	10%	1%	5%	100%

* Numbers are headcount not full-time equivalents (FTE)

Tenure Track/Non-Tenure Track Faculty

Trend since 2003



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
TENURE TRACK	216	240	242	241	236	248	254	260	269	270	259	239	230	223	228	231	227	230
NON-TENURE TRACK	238	288	283	301	369	428	454	504	468	527	460	457	426	382	384	379	347	358
TOTAL	454	528	525	542	605	676	708	764	737	797	719	696	656	605	612	610	574	588

Source: Faculty Administration

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
TENURE TRACK	48%	45%	46%	44%	39%	37%	36%	34%	36%	34%	36%	34%	35%	37%	37%	38%	40%	39%
NON-TENURE TRACK	52%	55%	54%	56%	61%	63%	64%	66%	64%	66%	64%	66%	65%	63%	63%	62%	60%	61%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

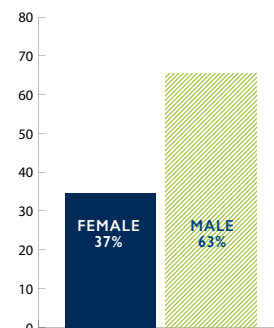
Faculty and Staff 2020

By Ethnicity

	Black/African American	American Indian/Alaskan Native	Asian	Native Hawaiian/Pacific Islander	Hispanic	White	Two or More	Unknown	Total
NPS GS/WG	35	2	41	6	35	187	14	8	328
NPS FACULTY	3	3	41	0	28	491	12	10	588
TOTAL	38	5	82	6	63	678	26	18	916

By Gender

	FEMALE	MALE	TOTAL
NPS GS/WG	174	154	328
NPS FACULTY	146	442	588
TOTAL	320	596	916





DUDLEY KNOX LIBRARY

RESOURCES



RESOURCES

Information Technology and Communications Services NPS Systems



Networks	Provider	Site
EDU	CENIC	nps.edu
HPR	CENIC	hpr.nps.edu
MIL	DREN	nps.navy.mil
Public (for guests)	CENIC	Public.nps.edu
DoDNet	NPS	Monterey DoD Interconnect: DMDC, PERSEREC, DLIFLC, NRL, FNMOC, NPS
"PACBell" Commercial ISP	AT&T	Research Network

User Data

Type	2012	2013	2014	2015	2016	2017*	2018	2019	2020
Profile & network storage	19.4 TB	22.2 TB	48 TB	39 TB	43.5 TB	60 TB	126 TB	145 TB	161 TB
Group Shares	8.7 TB	37.4 TB	30.3 TB	32 TB	111 TB	117 TB	209 TB	191 TB	129 TB
Virtualized server storage/Databases	22.5 TB	75.6 TB	158.74 TB	114 TB	214 TB	258 TB	170 TB	194 TB	301 TB
Total Backup/Recovery Storage	142.8 TB	45 TB	*	130 TB	228 TB	*	*	*	340 TB
Microsoft Exchange Online	*	*	*	*	*	*	*	11.5 TB	15.4 TB
Microsoft SharePoint Online	*	*	*	*	*	*	*	1.0 TB	2.1 TB
Microsoft OneDrive	*	*	*	*	*	*	*	13 TB	109 TB
Microsoft Teams Active Users	*	*	*	*	*	*	*	1,243	4,318
Microsoft 365 Groups	*	*	*	*	*	*	*	0.2 TB	1.0 TB
Box	*	*	*	*	*	*	*	25 TB	60 TB

Educational Technology

Description	2014	2015	2016	2017	2018	2019	2020
VTE & VTC SYSTEMS & SERVICES							
Video Bridge Ports	60	80	80	80	80	80	80
ISDN Channels directly connected to Video Bridge	0	0	0	0	0	0	0
ISDN Gateway Channels available to Video Bridge and VTC endpoints	253	253	253	253	253	253	253
VTC Equipped Spaces (includes meeting spaces and VTE specialized classrooms & studios)	42	42	36	57	53	43	47
VTC Conference Rooms	27	27	24	18	18	19	15
VTC or VTE Specialized Classrooms & Studios	15	15	24	39	39	24	26
AUDIOVISUAL SYSTEMS & SERVICES							
Multimedia presentation systems ⁴	133	133	130	130	130	130	N/A ⁴
Classroom AV Systems ⁵							110
Meeting Room AV Systems ⁶							26
ONLINE INSTRUCTION SUPPORT							
Resident courses shifted to Zoom/Teams/Collaborate (Q3,Q4)							623
Class hours recorded & streamed via the Internet	5,862	6,012	6,416	6,302	6,359	3,388	880
Collaborate participant hours. Tracking began FY14.	100,675	102,341	104,211	106,641	108,287	189,995	115,572
Collaborate: Class hours recorded & delivered.							

Educational Technology (continued)

Description	2014	2015	2016	2017	2018	2019	2020
LIVE ONLINE EVENTS							
Live Streaming Events (Total Events)							20
Live Streaming Events (Total Hours)							26
Live Streaming Events (Total Attendance)							4,787
Zoom Webinars Total Events ⁷							15
Zoom Webinars Total (Hours) ⁷							20
Zoom Webinars Total Attendance ⁷							1,156
Teams Live Events Total Events							4
Teams Live Events Total (Hours)							6
Teams Live Events Total Attendance							N/A ³
ZOOM/TEAMS SUPPORT							
Zoom/Teams Enabled Classrooms							8
Zoom/Teams Enabled Meeting Rooms							1
Zoom Meeting Sessions (Total) ⁷							42,635
Zoom Meeting (Hours) ⁷							425,921
Zoom Meeting Participants (Total) ⁷							387,980
Zoom Cloud Recordings (Total) ⁷							1.17 TB
Logins to the learning management system (not distinct users)	1,048,039	1,692,040	1,013,306	1,037,324	1,111,503	1,131,434	1,430,125
Sites (Courses and Projects) hosted on the learning management system	7,821	9,308	10,787	11,956	13,536	14,648	16,871

1 This reflects the total number of available Video-conferencing facilities. Previous editions only accounted for facilities managed by ITACS.

2 Class hours delivered through web-conferencing consists of expected growth and an increasing trend away from streaming classes via the Internet

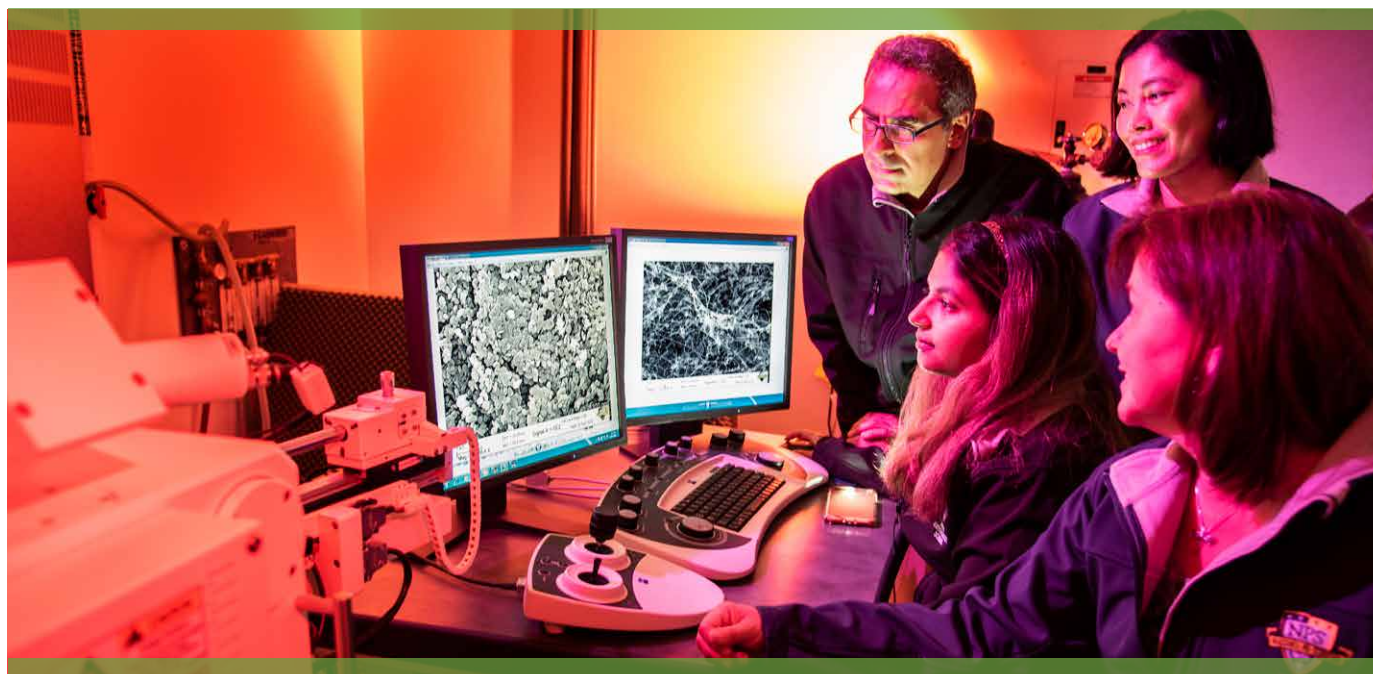
3 Historical data not available in Teams.

4 Beginning with FY20, count will be kept separately on "classroom" and "meeting space" AV systems.

5 Includes all classroom, computer classroom, VTC-equipped classroom, FLEx classroom, VTE classroom, VTE studio, and lab AV systems supported by AV Services.

6 Includes all conference room, auditorium, and collaboration space AV systems supported by AV Services.

7 Zoom data only covers FY20 Spring & Summer quarters. Older historical data not available from Zoom.



Source: Information Technology and Communications Services

Information Technology and Communications Services

High Performance Computing (HPC)



Description	2014	2015	2016	2017	2018	2019	2020
HPC supercomputer processors	3,154	4,290	4,698	5,166	4,516	6,140	5,156
HPC supercomputer users	210	356	327	180 ^{§§}	474	688	741
HPC disk space	475 TB	2 PB	3.2PB	3.2 PB	3.2 PB	3.2 PB	6.5 PB
Linux computers on campus	375	300 [§]	286 [§]	242 [§]	224	173 [§]	124 [§]
Linux users on campus	500	600	722	748	704	756	740

§Decrease due to virtualization
 §§Decrease due to expired account cleanup

University Education Partnerships

Corporation for Education Network initiatives in California (CENIC)

State research and education network [CalREN] links University of California campuses and system, California State University campuses and system, University of Southern California, Cal Tech, Stanford University and the Naval Postgraduate School, as well as providing connectivity to other national high-speed networks such as LambdaRail and Internet2.

Defense Research Engineering Network (DREN)

DOD's recognized research and engineering network. Robust, high-capacity, low-latency nation-wide network that provides connectivity between and among the HPCMP's geographically dispersed high performance computing [HPC] user sites, HPC Centers, and other networks.

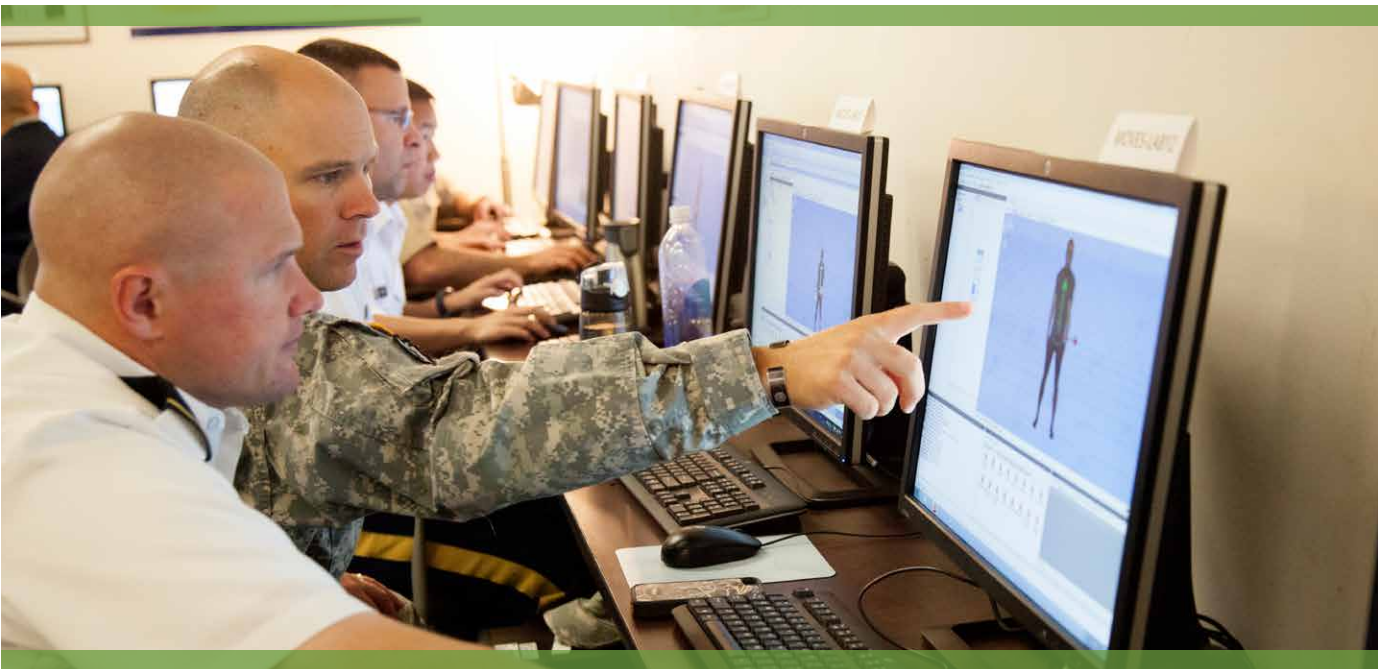
Monterey Peninsula Department of Defense Net

Regional DoD consortium with physical infrastructure linking Fleet Numerical Meteorology and Oceanography Center [FNMOC], Defense Manpower Data Center [DMDC], Naval Postgraduate School [NPS], Naval Research Lab, and Defense Language Institute - Foreign Language Center [DLI-FLC].

University and Defense Partnership Navy Higher Education IT Consortium

Naval Postgraduate School, Naval War College, and Naval Academy CIO's working to develop higher education-based collaborations to maximize effectiveness of technology use at each of the three institutions.

Source: Information Technology and Communications Services
 Source: Information Technology and Communications Services



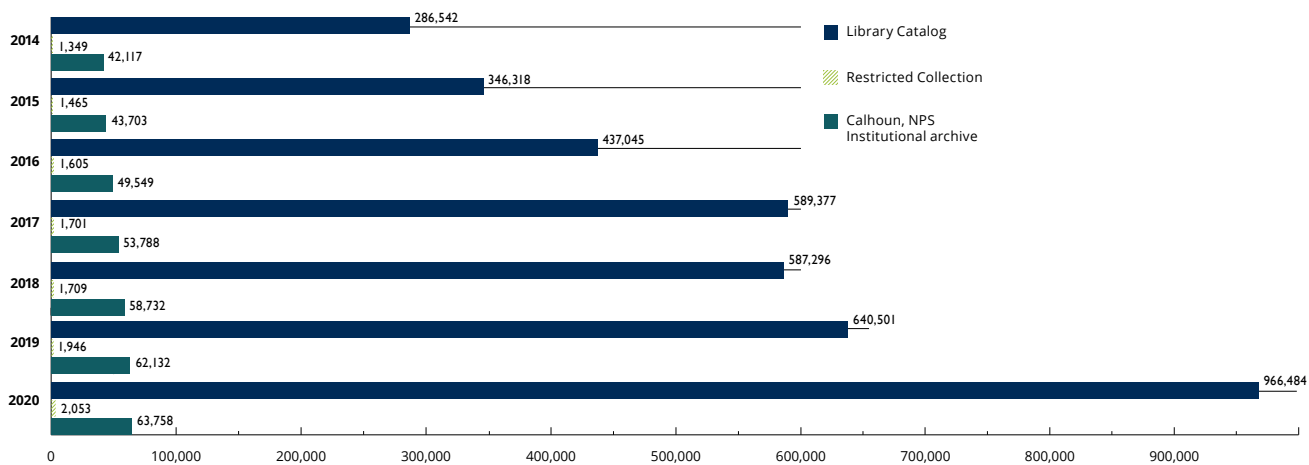
Dudley Knox Library

Quick Facts

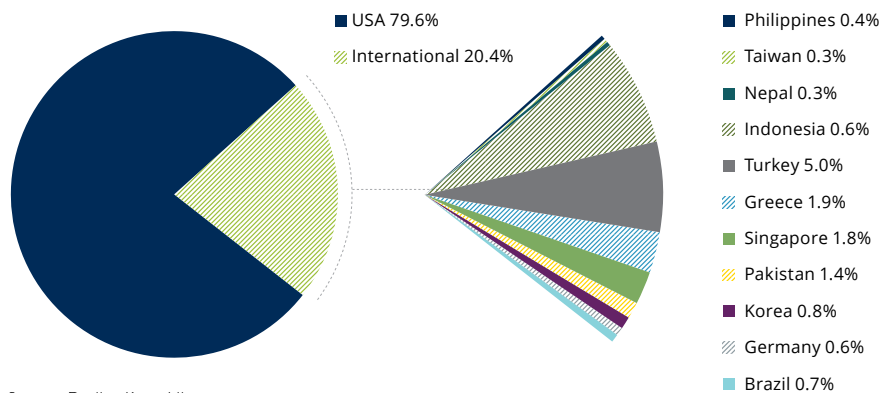
DESCRIPTION	2015	2016	2017	2018	2019	2020
Library staff FTE	28	27	26	25	21.5	22.5
Average weekly hours (Sunday-Saturday); extended hours during finals weeks	78	78	78	78	78	78
eResources available in library catalog (books, journals, reports & more)	391,486	377,192	589,377	587,296	640,051	966,484
eResources available in Restricted Collection (Restricted NPS Thesis, NPS Reports, etc.)	1,465	1,605	1,701	1,709	1,946	2,053
eResources in NPS Archive: Calhoun	43,703	49,549	53,788	58,732	63,132	63,758
On-site Library visits	313,199	280,376	281,393	272,037	260,761	108,457
Average daily library visits (on-site)	909	808	842	829	1,014	1,063
Average daily library visits (virtual)*	--	4,737	4,813	1,746	2,011	1,587
Hours students used collaborative study spaces	>8,200	8,164	24,051.75	28,267.25	28,851	12,376.50
Students receiving library instruction	2,746	2,435	2,501	2,432	2,191	1,968
Library instruction sessions offered (face-to-face and virtual)	146	126	138	149	134	118

*2018 changed to Google Analytics Sessions for counting virtual visits

Number of Electronic Resources



NPS Alumni Registered for AY2020 Library Access



Source: Dudley Knox Library

Alumni

YEAR	TOTAL
2009	1222
2010	1540
2011	1851
2012	2098
2013	2430
2014	2754
2015	3040
2016	3279
2017	3530
2018	3975
2019	4250
2020	4500

Academic Facilities

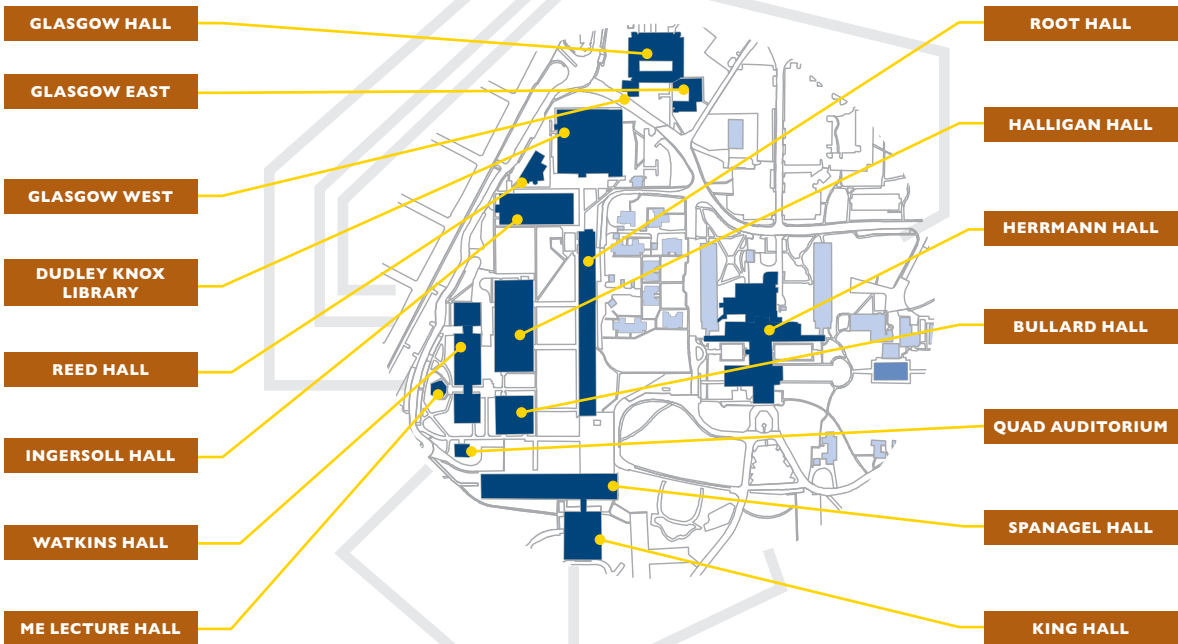


CLASSROOMS OF THE FUTURE (CR)
4 FLEx Classrooms with movable furniture and technology to support student-centered learning.

VIDEO CONFERENCING CLASSROOMS (VTE)
8 Video tele-education classrooms. Traditional style classrooms augmented with video-conferencing technology.

AUDITORIA
4 Large Auditorium facilities designed for conferences and similar large groups of audiences.

BASELINE CLASSROOMS (CR)
62 Traditional baseline classrooms with multi-media projection system and instructor computer. This is the minimum baseline technology for all traditional classrooms.



12 SYSTEMS ENGINEERING LABS
ROBODOJO (LAB)
 Lab equipped with 3D printers, laser cutters, embedded computing, basic electronics, and robotic software programming for students, staff, faculty and friends to "tinker" and learn about robot components and systems.
ARSENL (LAB)
 Advanced robotic systems engineering laboratory for physically building, testing, and programming robots, such as unmanned aerial vehicles (UAVs) situated next to computation, modeling and simulation resources.

3 SECURE FACILITIES
SCIF, STBL, LIBRARY
 NPS supports classified learning and communication in secure facilities.

68 MECHANICAL & AEROSPACE ENGINEERING LABS
SPACECRAFT ROBOTICS LABORATORY (LAB)
 Lab set up to test instructional robotic manipulators with location sensors for multiple floating robots on the artificial weightlessness test bed of granite to verify and improve autonomous control theory of spacecraft.
CAVR (LAB)
 Center for Autonomous Vehicle Research supports teaching and research in the area of autonomous systems, in particular underwater, surface and air vehicles.

9 SPACE SYSTEMS ACADEMIC GROUP LABS (LAB)
SMALL SATELLITE LABORATORY (LAB)
 Labs equipped to design, build, and flight qualify space payloads. Partners of this lab include DoD space, the Jet Propulsion Laboratory and the Air Force Institute of Technology.

Source: Facilities Management (2020)

FINANCIALS

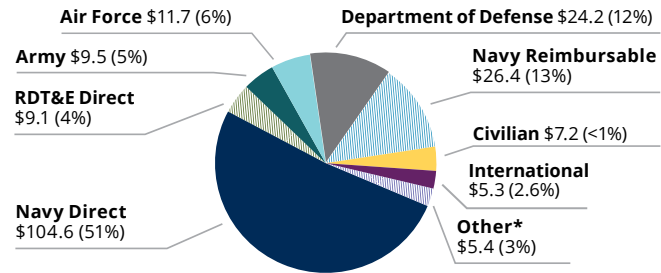


FINANCIALS



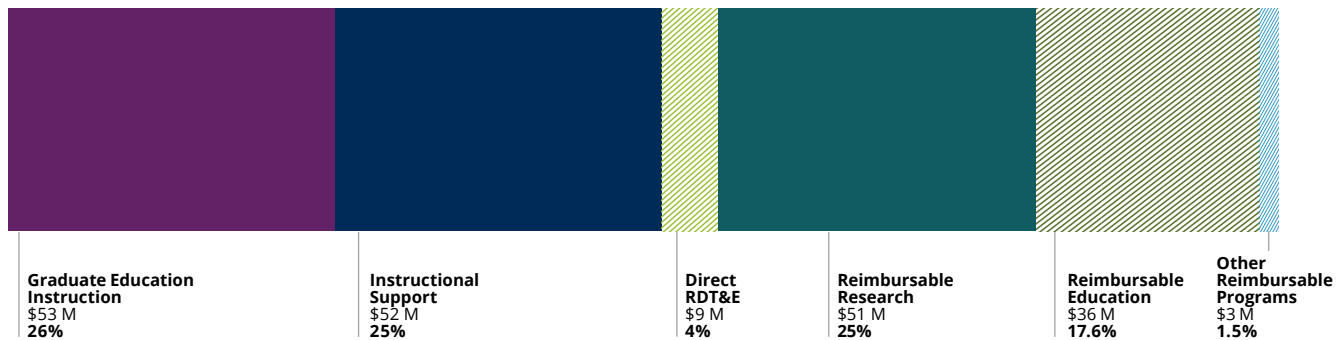
NPS FY2020 Funding By Source — Direct and Reimbursable

	PERCENTAGE	\$(IN MILLIONS)
Direct		
Navy Direct	51.4%	\$104.6
RDT&E Direct	4.5%	\$9.1
Reimbursable		
Army	4.7%	\$9.5
Air Force	5.8%	\$11.7
Department of Defense	12%	\$24.2
Navy Reimbursable	13%	\$26.4
Civilian	3.6%	\$7.2
International	2.6%	\$5.3
Other*	2.7%	\$5.4
		\$203.5**



*Other = Dept. of Energy, Homeland Security, Dept. of Justice, Dept. of State, Dept. of Veterans Affairs, Executive Office of the President, NASA, National Science Foundation
 ** Numbers do not sum due to rounding.

NPS FY2020 Financials By Category — Direct and Reimbursable

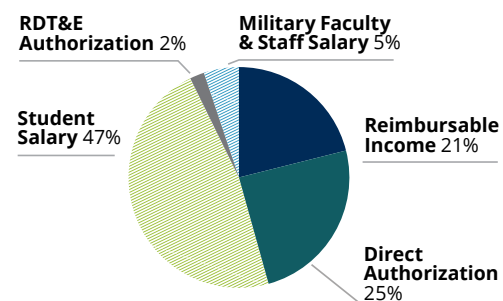


NPS Total Financial Resources

Total Operations & Military Salary — Budget by Source, FY2020

BUDGET ITEM	PERCENTAGE
Reimbursable Income	21%
Direct Authorization	25%
Student Salary	47%
RDT&E Authorization	2%
Military Faculty & Staff Salary	5%
TOTAL	100%

Source: Comptroller





NPS Hall of Fame Honorees

The NPS Hall of Fame recognizes the accomplishments of NPS' most distinguished alumni and friends who, through the attainment of positions at the highest levels of public service, have made the greatest contributions to society, their nations and to the Naval Postgraduate School.

Vice Admiral Edward Moore Jr. [Ret.]
[Inducted 26 Jan 2021]

Vice Admiral Jan E. Tighe [Ret.]
[Inducted 15 June 2018]

The Honorable Jack R. Borsting
[Posthumously inducted 27 Apr 2017]

The Honorable Everett Alvarez, Jr. [Ret.]
[Inducted 27 March 2015]

General Keith B. Alexander, USA [Ret.]
[Inducted 21 June 2013]

Colonel Walt Havenstein, USMCR [Ret.]
[Inducted 30 Nov 2012]

Admiral Eric T. Olson, USN [Ret.]
[Inducted 30 Nov 2012]

Admiral Stanley Arthur, USN [Ret.]
[Inducted 2 Dec 2011]

Dr. J. Phillip [Jack] London
[Inducted 2 Dec 2011]

Vice Admiral Pat Tracey, USN [Ret.]
[Inducted 3 Dec 2010]

Admiral T. Joseph Lopez, USN [Ret.]
[Presented 3 Dec 2010]

Vice Admiral Thomas J. Hughes, USN [Ret.]
[Posthumously inducted 3 Dec 2010]

General Apichart Penkitti, Permanent Secretary for Defense, Thailand [Ret.]
[Inducted 30 July 2010]

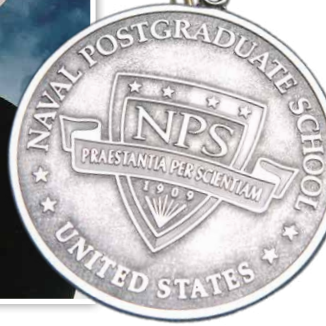
Admiral Michael Mullen, USN [Ret.]
[Inducted 11 Aug 2009]

General Michael Hagee, USMC [Ret.]
[Inducted 23 May 2009]

The Honorable Dan Albert, Mayor of Monterey [Ret.]
[Inducted 23 Feb 2007]



Vice Admiral Edward Moore Jr. [Ret.]



For the full list of Hall of Fame honorees and please see: nps.edu/web/alumni/hall-of-fame

Board of Advisors to the President, NPS Non-Federal Membership

Board Member	Title	Affiliation
Mr. Donald R. Dixon	Co-Founder	Trident Capital, Inc.
Mr. William J. Haynes	Independent Consultant	
Dr. Maren Leed Holmes	Senior Professor	Johns Hopkins University
Dr. Elizabeth Paté-Cornell	Professor	Stanford University
Honorable G. Kim Wincup	Senior Advisor	Center for Strategic Intl. Studies

Federal Ex-Officio Membership

Board Member	Title	Affiliation
Lt. Gen. Anthony J. Cotton, USAF	Commander and President	Air University
Rear Adm. David J. Hahn, USN	Chief of Naval Research	Office of Naval Research
Maj. Gen. John S. Kern, USA	Commandant	U.S. Army War College
Maj Gen William Mullen, USMC	Commanding General	Training and Education Command, USMC
VADM John Nowell, USN	Deputy Chief of Naval Operations	Manpower, Personnel, Training, and Education

In 2010, a new committee comprised of the Board of Advisors for both the Naval Postgraduate School and the Naval War College was established. The committee formerly referred to as the NPS Board of Advisors is now a permanent subcommittee of the new joint committee.

**IMMEDIATE IMPACT
FUTURE ADVANTAGE
ENDURING LEADERSHIP**

" NPS is the Navy's applied research university. There are functions that occur here that we can't get anywhere else in the world. "

*Adm. Michael Gilday
Chief of Naval Operations*

" The winning force will be the one who is faster with more effective decision-making processes that can out-think and out-operate with technology in new ways. It will be the force with the intellectual edge. "

*Gen. David H. Berger
Commandant, U.S. Marine Corps*



**OFFICE OF UNIVERSITY COMMUNICATIONS
NAVAL POSTGRADUATE SCHOOL**

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